

Predicting Relationship Satisfaction in Romantic and Non-Romantic Dyads:
The Impact of Attachment Style and Partner Behaviors

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Submitted to the graduate degree program in Psychology and the
Graduate Faculty of the University of Kansas in partial
fulfillment of the requirements for the of Doctor of Philosophy.

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Dissertation Defense Date: July 11, 2014

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Date approved: July 17, 2014

Abstract

The *social support* literature has a primary focus on the impact of objective partner behaviors on both relationship quality and the well-being of each partner. In contrast, the *adult attachment* literature stresses the relational impact of key intrapsychic processes. Very little research attention, however, has been accorded to the interrelationships that may exist between attachment style and social support. The present study, therefore, examines the relative contributions of attachment style and partner behaviors on reported relationship satisfaction, as well as the manner in which these contributions may differ across different relationship types – romantic dyads, friendships, and familial relationships. Participants were recruited from the popular crowd-sourcing website, Amazon Mechanical Turk, and structural equation modeling was employed to analyze hypothesized causal and mediational pathways. Attachment style and partner behaviors were each significantly associated with relationship satisfaction, with partner behaviors appearing to partially mediate the relationship between attachment style and relationship satisfaction. In general, avoidant attachment was more strongly associated with adverse partner behaviors – and with reduced relationship satisfaction – than was anxious attachment. However, the pattern of such effects varied somewhat across relationship type, with avoidant attachment being strongly predictive of negative partner behaviors only within the context of romantic relationships. Moreover, only relationship satisfaction with a romantic partner (as opposed to friend or family member) was predictive of life satisfaction. These findings are generally consistent with previous research indicating that attachment style and partner supportive behaviors each impact relationship satisfaction, yet they suggest a differential importance of attachment style and partner behaviors across different types of relationships.

Acknowledgments

I would like to express my deepest gratitude for the guidance offered and time given by each of the faculty members on my dissertation committee: Sarah Kirk, Ray Higgins, Rick Ingram, Alice Lieberman, Jeffrey Hall, and my chair, Steve Ilardi. I am grateful for their mentorship, support, and patience throughout this process. Also, so many thanks to John Sakaluk, Jared Harpole, and Christina Williams, each of whom were invaluable and gracious consultants in the several statistical and technical hurdles encountered – their patience and time allowed me to gain the understanding needed to undertake this project. Finally, I would like to thank my family, friends, and most of all, my parents. Their support and inspiration have allowed me not only to complete this hurdle on my way to collecting my Ph.D., but have also resulted in my arrival at the place (both as a person and a future psychologist) that I am at today. I feel so tremendously grateful to have each of them in my life.

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Predicting Relationship Satisfaction in Romantic and Non-Romantic Dyads:

The Impact of Attachment Style and Partner Behaviors

The past several decades have witnessed an increased focus among social scientists on the myriad potential benefits of social relationships (Cohen, 2004; Uchino, 2004). A primary impetus has been the growing body of evidence – both correlational and causal – regarding the significant positive and cumulative effects of social relationships on physical and mental health across the lifespan (Umberson & Montez, 2010). Mounting epidemiological evidence points to a close link between social relationships and a broad range of physical health outcomes, including the risk of disability and morbidity (House, Landis, & Umberson, 1988). Healthy relationships appear to confer multiple benefits, including increased longevity (Drefahl, 2012) and decreased risk of mortality from a variety of causes, such as cardiovascular disease and cancer (Berkman, Vaccarino, & Seeman, 1993; Helgeson, Cohen, & Fritz, 1998; Reifman, 1995). In a recent review of 148 studies encompassing more than 300,000 participants (Holt-Lunstad & Smith, 2012), cumulative empirical evidence implicated social support as a significant predictor of risk for mortality. Those in stronger social relationships (broadly defined by a literature review) experienced, on average, a 50 percent increased likelihood of survival in comparison with those in weaker social relationships. The finding held across studies evaluating all causes of mortality in aggregate, as well as those evaluating a specific cause of death (e.g., cancer, heart disease, etc.), and it was observed across age, gender, activity rate, and health status (Holt-Lunstad & Smith, 2012). Even when accounting for other health-related variables (e.g., SES, smoking, weight, etc.), those with the fewest social ties have been observed to face nearly double the risk of death in comparison with those having the most social ties (Berkman & Syme, 1979).

The effect size of social support on morbidity and mortality actually equals or surpasses that of other well-known health predictors, including physical activity, weight and obesity status, alcohol abuse, tobacco use, immunizations for influenza, and air pollution. “Poor social relationships are equivalent to smoking up to 15 cigarettes per day and are associated with double the risk of premature death when compared to obesity” (Holt-Lunstad & Smith, 2012, p. 43). Additionally, many of the relevant studies are longitudinal in nature, providing strong support for the causal impact of social relationships on mortality risk (Holt-Lunstad & Smith, 2012). The absence of social support has also been linked to a number of adverse health outcomes (House, Landis, & Umberson, 1988), among them: high blood pressure (Holt-Lunstad, Birmingham, & Jones, 2008), heart attacks, cancer recurrence, and age-related cognitive decline (Cohen, Gottlieb, & Underwood, 2000).

In addition to the aforementioned physical benefits, social support also appears to confer multiple mental health benefits. These include lower rates of depression and substance abuse (Pagel & Becker, 1987; Simon, 2002), decreased stress (Holt-Lunstad, Birmingham, & Jones 2008), higher life satisfaction (Holt-Lunstad, Birmingham, & Jones 2008), greater subjective well-being (Kamp Dush & Amato, 2005), and increased feelings of meaning and purpose in life (Bierman, Fazio, & Milkie, 2006). Additionally, negative social interactions can contribute to depression and negative emotions (Schuster, Kessler, & Aseltine, 1990), which in turn influence health through their impact on immune and endocrine regulation and stimulation of proinflammatory cytokine activity (Kiecolt-Glaser, Gouin, & Hantsoo, 2010). Such inflammation has been linked to cardiovascular disease, arthritis, osteoporosis, type 2 diabetes, cancer, Alzheimer’s disease, and periodontal disease (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002).

Consequences of Social Environments

There is substantial evidence that social support plays a significant role in physical and mental health outcomes. However, the preponderance of the earliest published research on the question had as its focus the relative presence or absence of social relationships. It is highly probable that many such investigations provided an overly conservative estimate of the benefits of positive social support, inasmuch as they utilized single-item measures of social relationships which often fail to account for the *quality* of such relationships, typically assuming that *all* relationships are positively valent in their impact (Holt-Lunstad & Smith, 2012; Rook, 1984). And yet, more recent research has found relationship quality to be a critical factor in determining the impact that social support has on health. Several studies indicated that individuals in low-quality or high-stress romantic relationships not only fail to benefit from such social “support,” but that they actually experience poorer outcomes than do their single counterparts on measures of health, happiness, and well-being (Holt-Lunstad, Birmingham, & Jones, 2008; Kamp Dush & Amato, 2005; Miller, Hollist, Olsen, & Law, 2013). The occurrence of negative behaviors in close relationships is associated with increased risk for heart disease and coronary incidents (De Vogli, Chandola, & Marmot, 2007) and with an increase in body mass index or transition from the overweight to obese category (Kouvonen, Stafford, De Vogli, Shipley, Marmot, Cox, et al., 2011). Additionally, negative social interactions and enduring relationship conflict are linked to increased proinflammatory cytokine secretion (Chiang, Eisenberger, Seeman, & Taylor, 2012; Kiecolt-Glaser, Gouin, & Hantsoo, 2010), susceptibility to the common cold (Cohen, Doyle, Skoner, Rabin, & Gwaltney, 1998), and higher illness burden in irritable bowel syndrome (Lackner, Gudleski, Firth, Keefer, Brenner, et. al., 2013). Negative interactions also appear to compromise overall immune and endocrine functioning (Kiecolt-Glaser & Newton, 2001).

Mental health is also adversely impacted by negative social relationships. Specifically, there is evidence that negative relationships increase the risk of psychosocial problems (Hartup & Stevens, 1999), depression (Kiecolt-Glaser & Newton, 2001; Teo, Choi, & Valenstein, 2013), and anxiety disorders (Bertera, 2005). Consistent with trends seen for physical health outcomes, those with problematic partners report greater depressive symptoms, and this negative effect is stronger than the positive effect of supportive partner behaviors (Horwitz, McLaughlin, & White, 1997).

Social support and social conflict are not on opposite poles of the same continuum. Each dimension has an independent impact on well-being. Moreover, social conflict appears to have a statistically greater adverse impact on mental health than does the absence of social support (Vinokur & van Ryn, 1993). Those who experience high levels of negative social interactions (e.g., engagement in relationships where one is regularly taken advantage or in which the relational partner consistently provokes conflict) report significantly lower self-reported well-being than those with positive social interactions (e.g., engagement in relationships that are sources of support and enjoyable companionship). Even after controlling for other variables, negative social ties are more strongly negatively related to level of well-being than positive social ties are positively related (Rook, 1984). Accordingly, other research points to social negativity having a greater detrimental impact on mood and anxiety disorders, as compared to the protective impact of positive social support (Bertera, 2005; Fiore, Becker, & Coppel, 1983).

In addition to the direct impact of negative social interactions on health, a number of indirect associations exist. Negative social environments are associated with poor adherence to medical regimens (DiMatteo, 2004), while strong social ties have been found to positively influence health behaviors (vis-a-vis smoking, weight gain, drug use, alcohol use, exercise, diet,

etc.) (Umberson, Crosnoe, & Reczek, 2010). The connection is important, as health behaviors account for approximately forty percent of premature mortality in the U.S., as well as a significant portion of morbidity and disability (McGinnis, Williams-Russo, & Knickman, 2002). Finally, not only are negative relationships damaging to mental and physical health, but the effects of social strain are cumulative and exert an increasing toll on health and mortality risk over time (Umberson, Williams, Powers, Liu, & Needham, 2006; Berkman & Syme, 1979).

While much of the research on the beneficial and adverse effects of social interaction has focused on marital and romantic relationships (Bloom, Asher, & White, 1978; Holt-Lunstad, Birmingham, & Jones, 2008; Kamp Dush & Amato, 2005; Kiecolt-Glaser & Newton, 2001; Tucker, Friedman, Wingard, & Schwartz, 1996; Uecker, 2012; Umberson, Williams, Powers, Liu, & Needham, 2006), a similar pattern of associations has also been noted within non-romantic relationships, such as those with friends and family (Byrd-Craven, Geary, Rose, & Ponzi, 2008; Hartup & Stevens, 1999; Singleton & Vacca, 2007; Wills & Cleary, 1996), and even co-workers (Rydstedt, Head, Stansfeld, & Woodley-Jones, 2012). Engagement in social organizations, such as religious groups, also positively impacts health outcomes and is a protective factor against premature mortality, with one relevant study observing that the risk of death was reduced 30-35 percent over a seven-year follow-up for those attending a religious service at least once per month (Musick, House, & Williams, 2004). In fact, a large longitudinal study found that marriage, contact with extended family and friends, church membership, and other formal and informal group affiliations each independently predicted decreased mortality risk through a nine-year follow-up period (Berkman & Syme, 1979).

The overall deleterious effects of negative social contact appear to exist across age and gender, although the extent of the negative outcomes may vary somewhat (Hartup & Stevens,

1999; Umberson, Crosnoe, & Reczek, 2010). For example, married men receive greater health benefits from marriage than do married women and report more detrimental health outcomes following marital disruption (House, Landis, & Umberson, 1988). This may be because women are more likely than men to have broader support networks that include close friends and relatives as confidants, while men are more likely to rely primarily on their spouse as sole confidant (Phillipson, 1997). Research also points to women – and particularly those of low socioeconomic status – being more vulnerable to negative aspects of close relationships. Women of low socioeconomic status display greater interpersonal sensitivity in social relationships, which may be in part the result of investing greater time and energy within the interpersonal relationships than do their relational partners (Notarius, Benson, Sloane, Vanzetti, & Homyak, 1989).

The impact of social exchanges also differs over time. In the short-term, positive interactions (e.g., in which one receives advice, support, companionship, etc.) predict positive affect, while negative interactions (e.g., in which one receives rejection, insensitivity, unwanted advice, etc.) predict negative affect. However, in a longitudinal study, negative interactions predicted both positive and negative affect, while positive interactions were unrelated to either in the long-term (Newsom, Nishishiba, Morgan, & Rook, 2003). Additionally, positive social ties are related only to psychological well-being, while negative social ties are related to both well-being and distress (Finch, Okun, Barrera, Zautra, & Reich, 1989).

Model of Social Support

Social relationships appear to be something of a mixed bag, with the potential to either improve or to impair health, functioning, and well-being. While several theoretical models of social relationships exist, most point to the relative presence or absence of social integration,

social support, and negative interaction as the primary aspects (Cohen, 2004). Social integration refers to the level of participation one has in a broad range of social relationships, as well as the sense of belonging they feel within their relational roles (Brissette, Cohen, & Seeman, 2000). This is an important area of study, but our primary focus here will be on the other two aspects of social relationships: social support and negative interaction.

Social Support. Social support refers to a social network providing psychological and material resources aimed at helping an individual cope with stressors (Cohen, 2004). Such resources include instrumental, informational, appraisal, and emotional aid (House, 1981), which may buffer the impact of stress resulting from negative life-events (Cohen & Wills, 1985). The particular categories and their labels vary somewhat across the literature, but in general they are repeatedly endorsed concepts (Barrera & Ainlay, 1983; Cohen, Gottlieb, & Underwood, 2000; Kerres Malecki & Kilpatrick Demaray, 2003).

Social resources are thought to be beneficial in multiple ways. For example, those with social support perceive that their social network will provide needed resources, a perception which in turn serves to dampen negative emotional and physiological responses to stressors (Wills & Cleary, 1996), acting as a buffer against depression and anxiety (Kawachi & Berkman, 2001). Perceived support increases one's ability to cope successfully with stress demands, and increases feelings of personal control (Uchino, Cacioppo & Kiecolt-Glaser, 1996; Thoits, 2006). It also decreases the likelihood that one will engage in behavioral coping responses detrimental to health, such as smoking, alcohol use, significant changes in sleep or diet, etc. (Uchino, Cacioppo & Kiecolt-Glaser, 1996). It seems that the *perception* that others will provide resources when they are needed may be of greater importance for health and well-being than the

experience of actually receiving (or not receiving) such support (Cohen, Gottlieb, & Underwood, 2001).

Instrumental resources include assistance in problem-solving by providing material aid or help with tasks (Cohen, 2004). This might include things like running errands for the assisted, watching their children, lending a car or giving them a ride, giving them money, and so forth. Not only have those receiving instrumental aid been found to benefit directly from the resources themselves, but they also benefit indirectly inasmuch as the provision of instrumental support communicates care and esteem (Semmer, Elfering, Jacobshagen, Perrot, Beehr, et al., 2008). Instrumental support has also been found to lower cardiovascular reactivity (Wilson, Kliever, Bayer, Jones, & Welleford, et al., 1999).

Informational aid refers to the provision of advice or information which the recipient may use in dealing with problems or stressors (Cohen, 2004). Such aid has been found to positively impact occurrence of reported clinical symptoms (as measured by the Hopkins Symptom Checklist) and mood among those experiencing significant life changes (Hirsch, 1980). In a study of interpersonal and social problems faced by children, boys were more likely to seek out informational support, while girls were more likely to seek emotional support (Kliever, Lepore, Broquet, & Zuba, 1990). This pattern appears to persist into adulthood. While both men and women who receive informational support note decreased anxiety surrounding surgery, only women receive significantly greater benefit from emotional support in the same context (Krohne & Slangen, 2005).

Appraisal support refers to the communication of expectations, evaluations, or personal feedback, as well as enhancement of esteem or worth (Cohen, 2004). Research points to the benefits of a relational partner acknowledging and responding to their partner's perspective and

encouraging their partner's self-initiation. This support of autonomy predicts greater relationship satisfaction, both by the partner giving and the partner receiving the support (Deci, La Guardia, Moller, Scheiner, & Ryan, 2006).

Emotional support refers to the expression of caring, empathy, reassurance, and trust, which fosters feelings of trust and allows one to feel comfortable sharing feelings and problems (Cohen, 2004). The competence a relational partner displays in providing emotional support has been found to be strongly related to relationship satisfaction in friendships (Buhrmester, Furman, Wittenberg, & Reis, 1988). It enhances psychological well-being and reduces risk of unhealthy behaviors and poor physical health (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002). The perceived availability of emotional support and the actual receipt of emotional support also appear to buffer the impact of stressful life events on adverse physical and mental health outcomes (reviewed in Cohen, 2004). Another form of emotional support is companionship and time spent together or spent engaging in mutually enjoyable activities. Perceived quality of relationship ties with friends and family is related to companionship and time spent together (Rook & Ituate, 1999).

One's relationship satisfaction may depend on more than just receiving resources, but also on *mutuality* within a given relationships. Mutuality refers to a shared sense within a relationship, including the degree to which members of a dyad share commitment to the relationship, as well as mutual comfort and interest in disclosing internal feelings, thoughts, and goals with one another. It involves social sharing and an approximately equal give-and-take of resources, without being narrowly defined as *quid pro quo* (Hartup & Stevens, 1999). Those couples with greater mutuality report that it is less effortful to engage in self-regulation when faced with threat cues (Coan, Kastle, Jackson, Schaefer, & Davidson, 2013). Mutuality is also

positively associated with greater emotional resiliency (Gottlieb, 1992) and with lower levels of depressive symptoms (Genero, Miller, Surrey, & Baldwin, 1992). Likewise, low reciprocity within relationships is associated with poor physical health outcomes (Chandola, Marmot, & Siegrist, 2007), and couples with higher agreement in degree of commitment to the relationship tend to have greater adjustment and well-being (Drigotas, Rusbult, & Verette, 1999).

Negative Interaction. While social relationships confer a number of significant potential benefits, they also offer opportunities for interpersonal conflict, exploitation, and stress transmission. As previously described, relational conflicts have been found to elicit psychological stress and, in turn, to increase behavioral and physiological concomitants of disease risk (Cohen, 2004). Such conflicts also adversely affect mental and physical health outcomes (Kiecolt-Glaser, Gouin, & Hantsoo, 2010). In fact, negative social interactions have a greater effect on well-being than do positive interactions, and interpersonal conflict and negativity are inversely related to overall relationship satisfaction (Jones & Vaughan, 1990). Additionally, greater exposure to negative social exchanges is associated with greater overall life stress (Rook, 2003). The perception of substantial conflict with family, partners, or friends has been found to predict greater distress and poorer adjustment following stressful life events such as abortion (Major, Zubek, Cooper, Cozzarelli, & Richards, 1997).

Other negative interaction types related to conflict include competition and bullying. Competition negatively impacts friendship satisfaction (Singleton & Vacca, 2007), as does bullying (Rex-Lear, 2011). The experience of victimization by peers predicts physical health problems across a wide age range and also leads to greater risk of both internalizing and externalizing symptoms of psychological disorder ((Kaukiainen, Salmivalli, Bjorkqvist, Osterman, Lahtinen, Kostamo, et al., 2001; Rex-Lear, 2011). And, unfortunately, the presence

of social support provides no protective effect against bullying, *and* poor social support appears to have an additive effect, further contributing to health problems (Rex-Lear, 2011). Moreover, targets of workplace aggression appear to suffer significantly more from physical and psychological problems than do those who report no such victimization (Kaukiainen, Salmivalli, Bjorkqvist, Osterman, Lahtinen, Kostamo, et al., 2001).

Exploitation in relationships includes a partner exaggerating their own needs, minimizing the other's needs, exaggerating their own effort in meeting the other's needs, minimizing their ability to meet the other's needs, ignoring the other's needs, minimizing the effort of the other to meet their needs, or pretending that past actions done for the other were part of an exchange, which obligates the other person to reciprocate with comparable benefit. Such exchanges are perceived by the recipient of those behaviors as exploitive, and they weaken perceived relationship quality (Mills & Clark, 1986). In one relevant study, a primary problem cited by older adults within their "difficult" friendships was having excessive demands placed on relationships, which in turn created resentment within such relationships (Blieszner & Adams, 1998).

Another significant negative interaction involves *stress transmission*, in which a friend or loved one's experience of an undesirable event adversely affects one's own well-being through the process of empathic emotional contagion (Rook, Dooley, & Catalano, 1991). This phenomenon has been noted particularly in romantic relationships, with depressive symptoms and emotional distress associated with the transmission of stress from one partner to the other (Beckham, Lytle, & Fedlman, 1996; Rook, Dooley, & Catalano, 1991). Additionally, women appear to be at greater risk for experiencing such effects (Rook, Dooley, & Catalano, 1991; Howe, Lockshin, Levy, & Caplan, 2004). An associated phenomenon is *co-rumination*,

communication between two or more individuals in which personal problems or negative events are frequently and excessively discussed. While research has shown that such communication can increase feelings of closeness (especially for females) (Rose, Carlson, & Waller, 2007), it is also associated with increased levels of internalizing symptoms, increased depressive symptoms (Calmes & Roberts, 2008; Haggard, Robert, & Rose, 2010; Rose, Carlson, & Waller, 2007), increased binge drinking (Ciesla, Dickson, Anderson, & Neal, 2011), and increased cortisol levels (Byrd-Craven, Geary, Rose, & Ponzi, 2008). Thus, co-rumination may amplify psychological distress rather than acting as a buffer against it.

It seems clear on the basis of the preceding review that health and well-being are significantly impacted both by the presence of relationships and by relationship behaviors. However, there are other factors at play. One particularly influential line of theoretical research points to one's *attachment style* as an important determinant of both the quality of close relationships and of the interpersonal behaviors that occur therein.

Attachment Theory

Attachment theory is concerned foremost with the strong adaptive bond that develops between a child and its primary caretakers, and the way in which that initial bond impacts the subsequent social interactions of the child as he or she develops. The theory was originally developed by Bowlby (1958), who proposed that infant attachment behaviors are driven by a need to maintain physical proximity to a nurturing adult for the biological purpose of ensuring survival and security. Specifically, Bowlby (1969/1982) divided motivational systems into functional types such as attachment, caregiving, exploration, affiliation, and sex, and conceptualized each as involving innate, functional, and goal-directed processes. These systems dictate choice, activation, and termination of behaviors aimed at achieving related goals. He

conceptualized behaviors patterns as being driven by needs which would have increased the likelihood of survival of self or genes in the environment of evolutionary adaptedness (EEA), and posited that the EEA was similar to that of present-day hunter-gatherer societies (Bretherton, 1992). One such behavior pattern is attachment.

Bowlby focused primarily on complex and flexible behavior patterns of eliciting and maintaining proximity and support between a child and caretaker. Such behaviors include crying, smiling, reaching, exploring the environment, empathizing with others in distress, etc. Bowlby also suggested that the relationship between caretaker and child significantly impacts the child's developing personality, and that the primary component of importance in this dynamic is the emotional availability and responsiveness of the caretaker. Interactions thus shape the child's view of world and self, particularly in the degree to which the child concludes he or she is worthy of care and attention. Such views are held to shape subsequent adult relationships through their impact on expectations, perceptions, and behavior (Bowlby, 1973).

Bowlby's work was subsequently expanded upon by Ainsworth and colleagues (1978), who defined three distinct infant attachment styles that differed depending on the primary caretaker's warmth and responsiveness. The three primary attachment styles identified by Ainsworth are *secure*, *anxious*, and *avoidant*, with each style marked by a characteristic pattern of feelings, behaviors, attention, memory, and cognition (Main, Kaplan, & Cassidy, 1985).

An anxious attachment style is characterized by inordinate concerns over being rejected or abandoned, along with doubts about self-worth in relationships. An avoidant attachment style is one in which the person avoids intimacy or emotional dependence on others, and minimizes the importance of relationships (Shaver & Mikulincer, 2002). Conversely, a secure attachment style refers to the maintenance of positive representations of both self and others. Ainsworth

relied on observable behaviors of caregiver and child interactions, and was also able to empirically link specific behaviors to each of the aforementioned patterns of attachment (Mikulincer & Shaver, 2007).

Attachment figures are those to whom one turns for support and protection in times of need (Bowlby, 1969). Such figures serve three primary functions. The first is as a target for proximity seeking, in which the individual seeks and benefits from physical proximity to the attachment figure. The next function involves the reliable provision of protection, comfort, support, and relief. Finally, the attachment figure serves as a “secure base” in which the person feels comfortable enough in the security of the relationship to pursue nonattachment-related goals (Hazan & Shaver, 1994).

During infancy, primary caregivers typically serve as the major attachment figures. However, from later childhood through adulthood, a wide variety of relational partners can serve as important targets of attachment, an array that includes friends, relatives, co-workers, teachers, romantic partners, and more.

Adult Attachment

Bowlby (1973) proposed that each person’s actual experiences impact the development of attachment style, particularly experiences with primary caregivers during childhood. He conceptualized attachment style as being like a train which is set on a given trajectory during infancy and childhood. The trajectory may be slightly adjusted by experience as a person ages, but it will generally continue heading in the same direction in the absence of major reversals or sharp changes in the train track. Bowlby (1973) drew on Piaget’s (1953) theory of cognitive development in his explanations of how attachment style in childhood continues to influence adult relationships. Specifically, he suggested that the mind assimilates new information within

existing knowledge structures (internal working models), and that individuals are likely to appraise, interpret, and recall social interactions in ways that confirm their preexisting expectations. For example, attachment style has been found to impact emotional experience and responses to partner behaviors (Gleason, 2005; Kerr, Melley, Travea, & Pole, 2003), as well as perception of social support received (Florian, Mikulincer, & Bucholtz, 1995).

Additionally, adults are more likely to choose attachment figures and to behave in ways that elicit belief-consistent interactions with attachment figures, thus reinforcing their working attachment models. For example, those with anxious attachment are less likely to be assertive in social interactions, while those with avoidant attachment are less likely to self-disclose in close relationships (Anders & Tucker, 2000). According to Bowlby's (1973) model, changes in attachment style may occur if an individual receives experiential information that is too disparate from the original working model to be assimilated, an occurrence that may cause the individual to adjust existing mental schemas to incorporate the new attachment-related information. In essence, early caregiver attachment may be regarded as an early "prototype" that informs all subsequent relationships, a template that influences, but does not fully constrain, social patterns throughout life. The initial attachment pattern of infancy thus interacts with subsequent attachment-relevant experiences in childhood, adolescence, and adulthood to determine an individual's profile of adult attachment patterns. Some empirical support has been found for such an attachment prototype model (Fraley, 2002; Sroufe, Egeland, & Kreutzer, 1990).

Bowlby assumed that while attachment is perhaps most important in early life, the attachment behavioral system is active across the lifespan, particularly during times of threat, need, loneliness, or demoralization. Triggers and support-seeking behaviors generally differ between children and adults, as most adults have developed skills to cope with problems and

self-soothe in a wider variety of contexts than can children. However, Bowlby viewed efforts to maintain contact with affectionate, trusted, and supportive figures as a natural human phenomenon across the lifespan; he thus regarded adult relationships as reciprocal attachment bonds (Bowlby, 1988).

Empirical Support for Adult Attachment

Adult attachment was first studied in systematic fashion by Hazan and Shaver (1987), who hypothesized that the bond within adult romantic relationships functions on the same motivational system that drives infant-caretaker bonds – i.e., the attachment behavioral system. And indeed, these researchers found that the three attachment styles observed by Ainsworth and colleagues also characterize adult relationships. Adults in close relationships often seek and receive support behaviors that may be viewed as the age-adjusted equivalent of those sought by children. Humans seek protection or comfort in response to experiences of threats or distress, returning to normal functioning once support is received and or the threat/stressor lifts. Tools needed to successfully navigate this cycle, regulate negative emotions, and sustain important relationships include knowledge that it is possible to cope with stress and threats, and a belief that that it will be accomplished in part via support from relational partners. This support from adult partners is less based on proximal support (a key feature of infant-caregiver), as adult attachment is not necessarily centered on proximity-seeking behaviors. Types of social support in adult relationships include emotional support, advice, and tangible aid.

The study of adult attachment has extended original categories of attachment and points to anxiety and avoidance as two underlying, independent, continuous dimensions (Brennan, Clark, & Shaver, 1998; Fraley & Waller, 1998). Those high on the anxious dimension tend to

worry about whether or not their partner is available, responsive, attentive to their needs, etc. Those high on the avoidant dimension prefer not to rely on others or to open up to others.

The above dimensions map on to a related model of adult attachment proposed by Bartholomew & Horowitz (1991), which focuses on views of self and others. In this model, *secure* individuals are low on both anxious and avoidant dimensions and view both self and others positively. *Preoccupied* (anxious) individuals are high on the anxious dimension and low on the avoidant dimension, viewing themselves negatively and others positively. *Dismissive* (avoidant) individuals are high on the avoidant dimension and low on the anxious dimension, viewing themselves positively and others negatively. Finally, *fearful* (fearful avoidant) individuals are high on both anxious and avoidant dimensions and view both self and others negatively. These ways of interacting significantly impact relationship quality and interpersonal problems. On scales of interpersonal factors, those with a secure attachment style report more warmth and nurturance and less coldness and introversion. Those with an avoidant (dismissive) attachment style report more coldness and introversion. Those with an anxious attachment style report more problems with over expression and less coldness and introversion. And, those with a fearful avoidant attachment style report more introversion, less assertiveness, and less over expression (Bartholomew & Horowitz, 1991).

In considering the impact of early attachment dynamics and experiences on later attachment relationships, parental attachments have been found to reliably predict peer attachment formation (Fraley & Davis, 1997; Miller & Hoicowitz, 2004), social skills, and relational competence (Engels, Finkenauer, Meeus, & Dekovic, 2001). In late adolescence and early adulthood, individuals appear to transfer many of their attachment needs and functions from parental figures to close friends and romantic partners. This transfer increases as a function

of the duration of the peer relationship (Fraley & Davis, 1997). Additionally, adolescents with insecure attachments to their primary childhood caregiver are likely to turn to romantic partners rather than parents (Markiewicz, Lawford, Doyle, & Haggart, 2005). Individual differences in adult attachment are predicted by variations in childhood and adolescent caregiving environments, and by the quality of their closest friendship (Dinero, Conger, Shaver, Widaman, & Larsen-Rife, 2008; Fraley, Roisman, Booth-LaForce, Owen, & Holland, 2013).

Much research has been conducted on the correlates of attachment style in adult relationships. Within romantic relationships, those who have secure attachment styles report more intimate and satisfying relationships than do those with anxious or avoidant attachment styles (See Mikulincer & Shaver, 2007, for review). This pattern also holds for relationship satisfaction within friendships (Welch & Houser, 2010). Additionally, those with secure partners report greater satisfaction with relationships than do those in relationships with insecure partners (Kane, Jaremka, Guichard, Ford, Collins, et al., 2007; Mikulincer, Florian, Cowan, & Cowan, 2002). Overall, securely attached individuals appear better able to learn from relationship mistakes, and to use such knowledge to shape relationships towards increasing satisfaction (Furman, 2001). Conversely, anxiously attached individuals are more likely to perceive their relationships as conflictual, to report feeling more hurt by perceived conflict, to believe that conflicts indicate more negative consequences in the future of the relationship, and to experience reduced relationship satisfaction (Campbell, Simpson, Boldry, & Kashy, 2005).

The attachment literature is extensive, covering many aspects of relationships and relationship quality. Attachment style has been found to significantly impact the relationships we choose to engage in and how we function within those relationships (Holmes & Johnson, 2009). Indeed, attachment style significantly factors into ratings of perceived relationship

quality in friendships (Doumen, Smits, Luyckx, Duriez, Vanhalst, et al., 2012) and in romantic dyads (Collins & Read, 1990). While the attachment literature acknowledges the impact of a relational partner's responses and behaviors on a person's attachment-related thoughts and actions, the focus in adult attachment is generally on intrapsychic *perception* of relationships, and the way in which previously developed attachment style can impact present relationship satisfaction (Mikulincer & Shaver, 2007). Less attention has been paid to the way in which relational events differentially impact present relationships after an attachment style is formed. Some research points to positive support behaviors in adult romantic relationships as predicting greater attachment security two years later, lending support to the idea that experiences influence attachment style over time (Dinero, Conger, Shaver, Widaman, & Larsen-Rife, 2008). Additionally, a study of romantic relationships found that both individual attachment style and level of the partner's caregiving each have predictive value of relationship function (Carnelley, Pietromonaco, & Jaffe, 1996). Attachment and caregiving behaviors are closely linked, as attachment seeking-behaviors activate a response in the form of the providing or withholding support behaviors.

Thus, while attachment style appears to account for some portion of relationship satisfaction and quality, a partner's behaviors also impact relationship satisfaction. Accordingly, it may be valuable to better understand the additional impact of actual negative and positive factors within a relationship at a given time, especially since many individuals have social ties characterized both by highly positive and highly negative interactions. Additionally, it is likely that the differential effects of behaviors within a relationship vary across relationship type and across age.

Adult Attachment across Relationship Types

The adult attachment literature has traditionally focused on romantic relationships. This is in large part because romantic partners are viewed as the primary attachment figure in adulthood. Indeed, for those with a significant romantic relationship, partners typically supersede parents as the primary attachment bond (Zeifman & Hazan, 2008). Less research has investigated the potential differences between various relationship types. However, according to the 2012 census (U.S. Census Bureau, 2012), there are 103 million unmarried adults in the United States. This is 44.1 percent of American adults, and 17 million of these are unmarried seniors. In addition, 33 million people live alone, comprising 27 percent of all U.S. households. Individuals may be single for many reasons, including divorce, death of a partner, or an inability to begin and maintain a successful romantic relationship. However, the view of singlehood as forced or pathological is also changing, as more individuals choose to marry later or to live single lives, allowing them to focus on careers, personal hobbies and interests, and more (Forsyth & Johnson, 1995). It is possible that such individuals turn more to friends and family for support and have equally satisfying relationships. In fact, reliance on friends to satisfy social needs is greatest when individuals are romantically uncommitted in early adulthood (Carbery & Buhrmester, 1998).

Given the fact that many adults do not have significant romantic relationships, and the related fact that romantic relationships are conceptualized as the primary attachment bond through which needs are met in adulthood, it may be useful to gain a better understanding of the differences between persons in and out of significant romantic relationships in regards to attachment style, relationship satisfaction, and life satisfaction. Additionally, many of those in romantic relationship may find the relationship unsupportive or unsatisfying, and may therefore

look to friendships or family-based attachments as their primary source of support. Research has suggested that individuals generally have somewhat more secure attachments with family members and friends than with romantic partners (Kamenov & Jelic, 2005). Moreover, when looking at stability of attachment style across relationship type, those with secure attachment styles demonstrate more attachment consistency across relationship types. Conversely, those with insecure attachments in romantic relationships compensate for this by seeking secure attachments with non-romantic relational partners, such as friends and family members (Kamenov & Jelic, 2005). It appears that relationship qualities and attachment style may vary based upon the relationship type being assessed. It is also possible that the age of the relational partners may further complicate the picture.

Aging and Attachment

It should be noted that established attachment patterns can shift somewhat over time and across relationships, but they are not typically changed significantly by life experiences (Scharfe & Bartholomew, 1994; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). In a relevant study spanning 6 years, adult attachment style was found to be relatively stable (Zhang & Labouvi-Vief, 2004). One relevant meta-analysis has concluded that attachment security is moderately stable, and appears to be best accounted for by a prototype perspective, which suggests that early attachment representations are retained and continue to influence relationships throughout life (Fraley, 2002). Another meta-analysis concluded that attachment ratings are relatively stable, but that this stability is not significant for intervals longer than 15 years. Additionally, they noted that those with secure attachments in childhood are less likely to maintain security whereas insecurely attached children are more likely to maintain insecurity (Pinquart, Feussner, & Ahnert, 2013).

However, distress and specific characteristic of a given relationship can moderate attachment stability, particularly when they are sustained (Scharfe & Cole, 2006). Additionally, strong positive marital relationships can positively shift an insecure working attachment model over time (Kotler, 1985), a finding that may in some ways explain age-related attachment changes. Specifically, older individuals become more secure and more dismissing (but less preoccupied) than younger individuals in close relationships (Zhang & Labouvie-Vief, 2004). Additionally, stress has a greater negative impact on life satisfaction for those under age 75 as compared to those over age 75 (Gray & Calsyn, 1989).

Indeed, age appears to play a significant role in many interpersonal and relational findings. We also know that older adults report less conflict and greater satisfaction in romantic relationships than do younger adults (even when controlling for length of relationship) (Levenson, Carstensen, & Gottman, 1993), that there are differences across the life span in the types of interpersonal tensions experienced (Cichy, Fingerman, & Lefkowitz, 2007), and that the average proportion of ambivalent relationships decreases with age (Fingerman, Hay, & Birditt, 2004). Additionally, negative social interactions typically decrease in frequency with age, while positive interactions remain about the same. A possible explanation for this is that contact frequency decreases with age (Akiyama, Antonucci, Takahashi, & Langfahl, 2003), but it may also be that older adults are more likely to maintain supportive relationship than ambivalent ones, or that they are less distressed by negative aspects of relationships, causing them to classify previously ambivalent relationships as supportive.

In similar fashion, measures of overall life satisfaction also vary as a function of age. For example, large, nationally-representative studies of adults have found that life satisfaction ratings are relatively stable in from early- to mid-adulthood and decrease significantly for older adults in

their 80s (Baird, Lucas, & Donnellan, 2010). Another study of adult men found life satisfaction follows a curvilinear trend from mid- to late-adulthood, with those in their 60s reporting significantly greater life satisfaction as compared to those in their 40s and 80s (Mroczek & Spiro, 2005).

Summary and Research Questions

Physical and mental health outcomes appear to be intimately linked to the quality of one's social relationships and the social support received therein (Cohen, 2004; Holt-Lunstad & Smith, 2012; House, Landis, & Umberson, 2010; Uchino, 2004; Umberson & Montez, 2010). Moreover, positive and negatively valent partner behaviors each make significant independent contributions to health outcomes (Bertera, 2005; Fiore, Becker, & Coppel, 1983; Rook, 1984; Vinokur & Ryn, 1993).

Substantial bodies of empirical evidence have been developed around two distinct relational foci: (a) the impact of social support and its correlates (Brissette, Cohen, & Seeman, 2000; Cohen, 2004; Cohen, Gottlieb, & Underwood, 2000; House, 1981); as well as (b) the role of adult attachment (Batholomew & Horowitz, 1991; Bolwby, 1973; Fraley & Waller, 1998; Hazan & Shaver, 1987; Mikulincer & Shaver, 2007; Shaver & Mikulincer, 2002). However, while the two research areas are plausibly related, they have traditionally had different emphases. The social support literature focuses upon the interpersonal aspects of social relationships, particularly measureable partner behaviors (Barrera & Ainlay, 1985). In contrast, the adult attachment literature generally stresses the role of intrapsychic processes, and the way in which attachment style (developed during childhood) predicts relationship quality and health outcomes in adulthood (Mikulincer & Shaver, 2007). Importantly, however, the two aforementioned research literatures are not well integrated. In fact, I am aware of no published investigations of

the relative contributions of attachment style *and* partner behaviors – considered in tandem – on relationship satisfaction, nor of the way in which these two factors may interact to determine satisfaction across varying relationship domains (romantic, nonromantic friendship, and familial) and across the lifespan.

Accordingly, the current study will investigate the interrelationships between adult attachment and relational partner behaviors in the prediction of relationship satisfaction within three major relationship domains – romantic dyads, close friendships, and non-romantic familial dyads. I will also address a methodological limitation of most previous investigations of “social support” by evaluating the impact not only of positive partner behaviors, but also those that are negatively valent, and I will explore how such behaviors may vary across relationship types and across important variables such as age and the duration of the relationship. I also hope that the methods used will allow better assessment of actual partner behaviors, as opposed to perceptions of partner behaviors. Finally, I will look at the association between relationship satisfaction and life satisfaction.

In particular, I hypothesize that both positively and negatively valent partner behaviors will partially – but not fully – mediate the effect of one’s attachment style on relationship satisfaction. In addition, I hypothesize that relationship satisfaction will predict life satisfaction.

Within romantic relationships, I plan to test secondary hypotheses regarding the degree to which such mediational paths may change based upon the duration of the relationship under consideration. I also plan to examine differences in the frequency of positive and negative social behaviors, in relationship satisfaction, and in life satisfaction across age, relationship type, romantic relationship status, and attachment style. Specifically, the present investigation will test the following key hypotheses:

1. Positive and negative behaviors that the respondent reports receiving from relational partners within close relationships partially mediate the relationship between attachment style and relationship satisfaction.
 - a. Additionally, I hypothesize that positive and negative partner behaviors will serve a greater mediational role between attachment style and relationship satisfaction in those relationships of shorter (versus longer) duration. This hypothesis is based upon the finding that adult attachment is influenced both by attachment style developed in infancy and childhood and by subsequent experiences within an adult relationship (Fraley, 2002; Sroufe, Egeland, & Kreutzer, 1990). Accordingly, I posit that the longer the duration of an adult relationship, the longer a relational partner has either to reshape or to reinforce an existing attachment style. Those who have longer relationships will have had more time to modify their working attachment models in order to better reflect the actual behaviors of their relational partner.
2. Because attachment style influences the way in which individuals attend to and weight the importance of various partner behaviors (Campbell, Simpson, Boldry, & Kashy, 2005), I hypothesize the following:
 - a. Across relationship type, negative partner behaviors will play a larger mediational role on relationship satisfaction in individuals who are high on the anxious dimension of attachment.
 - b. Positive partner behaviors will play a larger mediational role on relationship satisfaction for those low on both anxious and avoidant dimensions.

- c. I also expect both positive and negative partner behavior to play a smaller mediational role on relationship satisfaction among those high in avoidant attachment, because such individuals will seek increased emotional distance and thus may be less impacted by actual behaviors within the relationship.
- 3. The frequency of both positive and negative partner behaviors within a relationship varies as a function of attachment style and relationship type. Consistent with observed patterns of interpersonal problems across the major attachment styles described above (Bartholomew & Horowitz, 1991), I hypothesize:
 - a. Higher avoidant attachment style will be related to a lower frequency of both positive and negative partner behaviors within their relationships, because those with such an attachment style may seek less support from relational partners, as well as less overall contact.
 - b. Higher anxious attachment style will be related to a higher frequency of both positive and negative partner behaviors, because those with such an attachment style may be more likely to seek more support and because their style of support seeking may elicit greater frequency of negative behaviors from relational partners.
- 4. Relationship satisfaction mediates the relationship between attachment style and life satisfaction.
 - a. Consistent with previous findings that attachment style predicts relationship satisfaction (Collins & Read, 1990; Doumen, Smits, Luyckx, Duriez, Vanhalst, et al., 2012), and that high-quality relationships are related to health and well-being (Holt-Lunstad, Birmingham, & Jones 2008), I hypothesize that

those with more satisfying relationships and secure attachment styles will report greater life satisfaction than those with less satisfying relationships and insecure attachment styles. Importantly, I predict that relationship satisfaction will mediate the relationship between attachment style and life satisfaction.

5. Significant differences exist in relationship and life satisfaction between those in romantic relationships and those who are not in romantic relationships.
 - a. Consistent with previous research (Holt-Lunstad, Birmingham, & Jones 2008), I hypothesize that those in romantic relationships will report greater life satisfaction than those who are not. However, as previous research has pointed to relationship quality as a critical factor in health and well-being (Holt-Lunstad, Birmingham, & Jones, 2008; Kamp Dush & Amato, 2005; Miller, Hollist, Olsen, & Law, 2013,), I hypothesize that this between-group difference will be moderated by relationship satisfaction, with those in less satisfying relationships reporting lower life satisfaction than those who are single.
 - b. Given that single adults place more reliance on friends and family than do romantically attached adults (Carbery & Buhrmester, 1998), I hypothesize that those not in romantic relationships will report greater frequency of positive behaviors in friendships and family relationships than do those in romantic relationships.
6. Attachment style, relationship satisfaction, and life satisfaction will vary as a function of age. Specifically:

- a. Consistent with previous research (Zhang & Labouvie-Vief, 2004), I hypothesize that age will be positively associated with secure attachment, and that this trend will be noted across all three relationship types examined.
- b. Consistent with previous research (Levenson, Carstensen, & Gottman, 1993; Cichy, Fingerman, & Lefkowitz, 2007), I hypothesize that older adults will report greater relationship satisfaction across relationship types.
- c. Consistent with previous research (Blanchflower & Oswald, 2008; Mroczek & Spiro, 2005), I hypothesize that life satisfaction will display a curvilinear aging trend, with those in their 40s and 50s reporting the lowest overall life satisfaction.

Method

Participants

Participants were recruited from the popular crowdsourcing web service, Amazon Mechanical Turk (MTurk). Power analysis calculations yield a recommended minimum sample size of 200 participants needed for satisfactory model structure of the study's principal SEM analyses (see Figures 1 and 2), based upon modest anticipated effect sizes (path coefficients > .10) and a power level of 0.80. In an effort to safeguard against potential missing data, 338 participants were recruited, with a total of 307 completing items beyond demographic information. The mean survey completion time was 20 minutes, the modal completion time was 14 minutes, and 89.3% of respondents completed the survey in 30 minutes or less. Respondents were paid \$1.00 for their participation.

Inclusion criteria included the following: (a) participants currently reside in the United States; and (b) they are over the age of 18. Common qualification requirements in MTurk

studies were also used to increase the likelihood of valid responses. This included requirements that a given participant has an acceptance rate of 95 percent overall across other MTurk work completed and has completed a minimum of 50 other tasks in the course of their work with MTurk. More information about these approaches is reviewed in the next section.

Mechanical Turk. The study used the popular crowd sourcing web service, Amazon Mechanical Turk (MTurk), for participant recruitment. This service coordinates the supply and demand of tasks that are referred to as human intelligence tasks (HIT; Paolacci, Chandler, & Ipeirotis, 2010). Those completing tasks are known as “workers,” “turkers,” and “independent contractors.” Those posting tasks to be completed are known as “requesters.” Workers are typically paid for their work, with payment for tasks beginning at \$0.01 and rarely exceeding \$1.00 (Paolacci, Chandler, & Ipeirotis, 2010). This service is becoming more widely used as a source of fast, inexpensive, and quality data, and has been utilized by researchers in a number of fields, including psychology (Birnbaum, 2000; Nosek, 2007) and sociology (Centola, 2010; Salganik, Dodds, & Watts, 2006). While the data collected from this site were initially treated with skepticism, considerable research has indicated that such data are at least as reliable as those obtained via traditional methods, such as college students in introductory psychology courses (Buhrmester, Kwang, & Gosling, 2011; Casler, Bickel, & Hackett, 2013). In fact, online labor markets have been compared head-to-head with traditional laboratory and field experiments and have been found to generate data that is equivalent in terms external and internal validity (Horton, Rand, & Zeckhauser, 2011), and that is almost indistinguishable from in-person undergraduate college samples (Casler, Bickel, & Hackett, 2013). MTurk samples have even demonstrated good test-retest reliability on a 120-item measure of personality (Holden, Dennie, & Hicks, 2013).

Several concerns are commonly raised regarding data collected online, the first of which is that non-serious or repeat responders will negatively impact the quality of data obtained. However, there is no evidence to suggest that data collected online differs from that collected via traditional methods, or that data are adversely affected by non-serious or repeat responders (Gosling, Vazire, Srivastava, & John, 2004). Additionally, tasks on MTurk can be structured in order to prevent a user from repeating the same one multiple times, and the site forbids workers from using programs or “bot” to automatically complete work for them. MTurk also has a built-in reputation system in which requesters can reject a worker’s submission if it is subpar (e.g., they failed to follow instructions, engaged in random responding, etc.), and subsequent requesters can use rejection rates of workers as an exclusion criterion for accessing a given task. A common qualification for workers to be able to view and participate in tasks is the previous completion of at least fifty HITs and an acceptance rate of 90 or 95 percent overall (Kittur, Chi, & Suh, 2008).

MTurk workers are paid for their participation in online tasks and research, and this payment is often quite low. This has raised concerns of possible low motivation and the subsequent negative impact on data quality. In a survey of MTurk workers, a small proportion (13.8%) identified such tasks as their primary source of income, with 61.4 percent reporting the work as a way to earn some additional money (Paolacci, Chandler, & Ipeirotis, 2010). The modal response for U.S. workers was that the money earned via MTurk is a nice way to pay for “extras” (Mason & Suri, 2012). Most workers on MTurk spend no more than one day each week and earn no more than \$20 per week completing MTurk tasks. Other non-monetary reasons for working included entertainment (40.7%) and “killing time” (32.3%). Additionally, nearly 70 percent of Mturk workers in the United States reported a belief that completing tasks on MTurk

is a “fruitful way to spend free time” (Paolacci, Chandler, & Ipeirotis, 2010), which is consistent with other research with this population (Chandler & Kapelner, 2012). MTurk workers also produce greater quality and quantity of work when they are primed to believe a task is meaningful, as compared to those who are not informed the work is meaningful or who are led to believe the work would be shredded (Chandler & Kapelner, 2012)

Another commonly raised concern in regard to collecting data online is that those completing such tasks are not representative of the general population. MTurk workers represent 66 countries, but are predominantly American (47%). Of workers from the United States, 64.85% are female (Paolacci, Chandler, & Ipeirotis, 2010). While this represents a gender discrepancy from the general population, this discrepancy is smaller than that of a traditional sample as reviewed across a full year of studies in *Journal of Personality and Social Psychology* (2002; 510 samples from 156 articles of empirical studies) studies, in which 71% of samples were female (Gosling, Vazire, Srivastava, & John, 2004). The average age of American MTurk workers is 36.0 years old, with a range from 18 to 81. Additionally, the self-reported education level of these workers is higher than among the general population (Paolacci, Chandler, & Ipeirotis, 2010) and internet samples have been generally found to be relatively diverse with respect to SES and geographic region (Gosling, Vazire, Srivastava, & John, 2004). Overall, MTurk workers do differ in age, race, ethnicity, education, and income as compared to the general population. However, these differences are smaller than the differences between traditional university subject pools and the general population (Casler, Bickel, & Hackett, 2013; Paolacci, Chandler, & Ipeirotis, 2010). Finally, internet users have been found to be as socially engaged as nonusers and no different on traits of neuroticism or introversion as compared to university subject pool participants (Gosling, Vazire, Srivastava, & John, 2004). Overall,

evidence points to no loss in quality and the gain of several benefits with the use of data from MTurk, including increased diversity from university samples, speed at which data can be obtained, and relatively low cost. Please see Gosling, Vazire, Srivastava, & John (2004) and Paolacci, Chandler, & Ipeirotis (2010) for extensive review and discussion of the benefits and drawbacks of using MTurk for research purposes.

Measures

Demographic characteristics. A background questionnaire was created to assess the basic demographics of the sample. These included age, gender, ethnicity, primary religious identification, level of education, number in household, annual household income, and current romantic relationship status. Please see Table 1 for the frequencies and percentages for each of these demographic items.

Satisfaction with Life Scale. The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985; see Appendix A) is a 5-item measure of global life satisfaction and subjective well-being. It asks respondents to report on a 1-7 scale (*1=strongly disagree; 7 = strongly agree*) the approximate extent of agreement with statements regarding how satisfying they find their life to be (e.g., “In most ways my life is close to ideal,” and “If I could live my life over, I would change almost nothing.”). It assesses the conscious judgment of an individual based upon their own criteria, and has demonstrated good stability and sensitivity. It has also demonstrated good internal consistency, convergent and discriminant validity, and reliability ($\alpha > 0.80$) (Arrindell, Heesink, & Feij, 1999; Pavot & Diener, 1993).

Experiences in Close Relationships-Relationship Structures. The Experience in Close Relationships-Relationship Structures (ECR-RS; Fraley, Heffernan, Vicary, & Brumbaugh, 2011; see Appendix B) is a nine-item self-report measure derived from an item-response theory

(IRT) analysis of several attachment measures, including the Experiences in Close Relationships – Revised (Fraley, Waller, & Brennan, 2000). The ECR-RS is designed to assess attachment patterns in a variety of close relationships, including romantic relationships, friendships, and familial relationships. It provides separate factor scores for anxious and avoidant attachment dimensions. Respondents are asked to rate on a scale of 1-7 (*1 = strongly disagree; 7 = strongly agree*) the extent to which they agree or disagree with a series of attachment-related prompts about a specific relational partner (e.g., “It helps to me to turn to this person in times of need,” and “I don’t feel comfortable opening up to this person.”).

In this study, respondents were asked to complete the measure once for each of the three relationship assessed. Relationship-specific measures generally better predict intra- and interpersonal outcomes, while broader attachment measures better predict personality traits (Fraley, Heffernan, Vicary, & Brumbaugh, 2011). As we are most interested in relationship and life satisfaction, assessing specific relationships will better serve our purposes. The ECR-RS has demonstrated good test-retest reliability (0.65-0.80) and validity. The lowest alpha found across the assessment of attachment with mother, father, partner, and friend was 0.85, which is only slightly lower than those of the significantly longer measures. Authors suggest that the specificity added by assessing a specific relationship reduces measurement noise, thereby allowing fewer items without sacrificing precision (Fraley, Heffernan, Vicary, & Brumbaugh, 2011). Additionally, the measure has been found be meaningfully related to several relational outcomes, such as relationship satisfaction and perception of emotional expression (Fraley, Heffernan, Vicary, & Brumbaugh, 2011; Fraley, Niedenthal, Mark, Brumbaugh, & Vicary, 2006).

Relationship Assessment Scale. The Relationship Assessment Scale (RAS; Hendrick, Dicke, & Hendrick, 1998; see Appendix C) is a 7-item measure of relationship satisfaction. Respondents are asked to rate on a 1-5 scale (*1 = poor/unsatisfied/poor/never/hardly at all/not much/very few; 5 = extremely well/extremely satisfied/excellent/very often/completely/very much/very many*) the extent to which they are satisfied with a specific relationship and relational partner (e.g., “How good is your relationship compared to most,” and “How many problems are there in your relationship.”). The scale correlates highly with measures of marital satisfaction, demonstrates high test-retest reliability, and shows consistent measurement properties across a wide variety of demographics (Hendrick, Dicke, & Hendrick, 1998). In addition, slight adaptation to item wording allows for testing of multiple relationship types, including romantic relationships, friendships, and family relationships. Empirical testing of psychometric properties revealed the maintenance of high internal consistency, reliability, convergent validity, and predictive validity across a diversity of relationship types (i.e., romantic partners, parents, friends, and other family members) (Renshaw, McKnight, Caska, & Blais, 2010).

Inventory of Socially Supportive Behaviors. The Inventory of Socially Supportive Behaviors (ISSB; Barrera, Sandler, & Ramsay, 1981; see Appendix D) is a widely used 40-item measure assessing the frequency (*1 = not at all; 5 = about every day*) with which the respondent was the recipient of socially supportive behaviors over the preceding four week time period. Example items include asking about the frequency with which a specific relational partner “Let you know that you did something well,” or “Loaned you over \$25.” The items can be summed to form a total frequency score or an average frequency score can be calculated, which permits calculation of a global score in the face of missing data for some of the forty items. Scales directly assessing frequency over a brief time period were chosen in order to try to minimize

perceptual biases related to the respondent's attachment style and better elucidate the impact of actual partner behaviors (Florian, Mikulincer, & Buchholtz, 1995). The ISSB has demonstrated excellent internal consistency above 0.9 (Barrera, 1981; Barrera, Sandler, & Ramsay, 1981; Cohen et al., 1984; Stokes & Wilson, 1984). Test-retest reliability ranges from 0.63 to 0.88 (Barrera & Ainlay, 1984; Barrera, Sandler, & Ramsay, 1981; Valdenegro & Barrera, 1983). The measure also demonstrates good validity (Barrera, Sandler, & Ramsay, 1981) and its variable components are consistent with social support behaviors cited in the support literature. Studies of the factor structure of the ISSB show considerable agreement and point to three primary factors: Guidance, Emotional Support, and Tangible Support (Barrera & Ainlay, 1983; Caldwell & Reinhart, unpublished; Stokes & Wilson, 1984). The items on this scale assess for the frequency of relevant social support resources provided, as described in the previous section. In this study, participants will complete this scale in regards to supportive behaviors occurring in each of three identified relationships.

Test of Negative Social Exchange. The Test of Negative Social Exchange (TENSE; Ruehlman & Karoly, 1991; see Appendix E) is an 18-item inventory designed to measure negative behaviors in social relationships. Its subscales include hostility/ impatience, insensitivity, interference, and ridicule. Respondents are asked to rate the frequency of negative events on a Likert scale (0 = *not at all*, 4 = *about every day*). Example items include asking about the frequency with which a specific relational partner "Took me for granted" or "Nagged me." Scores can be broken down by factor or summed for an overall index of interpersonal tension (Ro & Lawrence, 2007; Shumacher & Leonard, 2005). The measure demonstrates good psychometric properties, including good convergent and discriminant validity and test-retest reliability ranging from 0.65 to 0.80 (Ruehlman & Karoly, 1991), as well as good internal

consistency of 0.89 (Darbonne, Uchino, & Ong, 2013). It has also been used to measure social conflict in familial relationships, friendships, and romantic relationships (Schuster, Kessler, & Aseltine, 1990). The items on this scale assess for the frequency of relevant negative interactions, as described in the previous section.

Procedure

The external Human Intelligence Task (HIT) posted on MTurk contained a link leading qualifying participants to a survey constructed on the survey site, Qualtrics. By linking to an external survey site, responses remain anonymous and are unable to be connected with a respondent. Respondents entered an anonymized worker ID maintained by Amazon, via which their payment could be claimed following the verification by the researcher that participation occurred. On the preview page of the HIT, there was a statement explaining the purpose of the study, as well as the risks and benefits of the study. Also included were the contact information for the researcher and the University of Kansas HSCL, should the participants want to report or discuss any problems experienced during the course of the study.

Only those workers who had previously completed a minimum of fifty HITs and had acceptance rates of at least 95% overall were able to view the survey. Participants completed the study's set of demographic questions, followed by a measure of life satisfaction (SWLS). They were asked to complete measures of attachment (ECR-RS), positive (ISSB) and negative (TENSE) relationship behaviors, and relationship satisfaction (RAS) for each of three relationships. Participants were asked to nominate three specific close relationships: (1) closest non-relative friendship; (2) closest family relationship; and (3) EITHER a current romantic relationship (for those in romantic relationships at least 6 months duration) OR a second close friendship (for those not currently romantically attached or attached for less than 6 months). The

decision to use 6 months as a minimum cut-off was a practical one, without empirical basis.

Romantic attachments are thought to take an average of approximately 2 years to develop (Fraley & Davis, 1997), but this time length was not selected out of concern that setting the cut-off at 2 years would significantly lower the number of respondents reporting on a romantic relationship.

Following the completion of the survey questions, participants were presented with the debriefing statement prior to receiving the code for payment and exiting the task.

Plan of Analysis

Statistical analyses for the primary hypotheses were conducted using MPlus version 6.11 to test mediational models (See Figure 1) of relationship satisfaction and life satisfaction using structural equation modeling (SEM). This statistical method permits model construction that reflects hypothesized variable interrelationships, as well as model evaluation via robust test statistics and fit indices. Such models can include both observed (directly measured) and latent variables.

Imputation procedures were conducted for missing data using Maximum Likelihood (FIML) estimation. To account for missing data, this method iteratively searches for the population parameters that are most likely to have generated the observed data. It allows all available information to be used to estimate model parameters and produces unbiased results and correct standard errors when data is missing at random. Items were then parceled. Parceling is the averaging or summing of two or more items to create indicators of a construct. This is beneficial in that it decreases the amount of parameter estimates, lowers the indicator-to-sample size ratio, lowers the likelihood of correlated residuals and dual factor loadings, and reduces sources of sampling error. Additionally, parcels have better psychometric properties (e.g., higher reliability, lower likelihood of distributional violations), as compared to individual items (Little,

Rhemtulla, Gibson, & Schoemann, 2013). Parcel formation was established via the standard practice of grouping items based upon item loadings to create parcels with approximately equal balance in terms of their difficulty and discrimination [see Little, Cunningham, Shahar, & Widaman (2002) for a discussion of the costs and benefits of various parceling strategies]. All but one construct (due to too few items) was made up of three parcels, or indicators. The argument has been made that models with three-indicator constructs are defined more precisely, allowing for better tests of structural model parameters [see Little (2013) for more information on rationale for three-parcel construction as providing a superior model fit].

A Confirmatory Factor Analysis (CFA) to confirm the goodness of fit of the full measurement model – which included all latent constructs – was then conducted. Following this, mediational models for each relationship type (friendship, family member, romantic partner) were tested with separate regression paths from: (a) attachment style to partner behavior, and (b) from partner behavior to relationship satisfaction.

Partial mediation hypotheses were also tested by examining the effects of attachment beyond its potential impact on partner behaviors. Specifically, these partial mediation hypotheses were tested by examining beta paths from attachment style to relationship satisfaction and from partner behaviors to relationship satisfaction. A second mediational model was tested by means of regression paths from attachment to relationship satisfaction and from relationship satisfaction to life satisfaction.

Results

Measurement Model

As described above, parcel formation was established and the CFA was conducted on the full model, which included all six latent variables. The measurement model was identified by

fixing the variance of each latent factor to 1.0. The fit for the measurement model was acceptable ($\chi^2_{(828, n=307)} = 1820.830, p < 0.000$; RMSEA = $0.062_{(0.059-0.066)}$; CFI = 0.924; TLI = 0.910; SRMR = 0.050). Per standards of the field, model fit for both the measurement and structural models was determined by looking at relative and absolute fit indices as a whole, rather than focusing on a single index. The latent variable estimates are provided in Table 2.

Structural Models

Following establishment of the measurement model, the relevant structural models were tested. The primary relationship satisfaction mediation hypotheses were tested for each of the 3 relationship types (romantic, friend, family), using the directional path of partner behaviors as a partial mediator with a possible direct effect of attachment style on relationship satisfaction. There is general agreement that partial mediational paths are identified by testing for a nonzero $a*b$ path (Preacher & Hayes, 2004; Rucker, Preacher, Tormala, & Petty, 2011). The most widely accepted method for doing so is known as bootstrapping (Preacher & Hayes, 2004). The MPlus statistical package allows for this function and generates an indirect $a*b$ path calculation.

A second mediation hypothesis was also tested; specifically, relationship satisfaction was theorized to act as a mediator between attachment style and life satisfaction.

Partner behaviors as partial mediators between attachment and relationship satisfaction. A main question of interest concerns the role of negative and positive partner behaviors as partial mediators of the relationship between attachment style and relationship satisfaction within each of the three primary relationship types (Hypotheses 1, 2, and 3). Autoregressive paths were created from the avoidant attachment and anxious attachment subscales of the ERC-RS to the measures of positive (ISSB) and negative (TENSE) relational

partner behaviors, and from the ISSB and TENSE to the measure of relationship satisfaction. Direct paths were also created from the two attachment subscales to relationship satisfaction.

Relationship Satisfaction Mediation Model for Romantic Partners. The results of the model for romantic partners are shown in Figure 2. The model overall had an acceptable fit ($\chi^2_{(69, n=307)} = 254.033, p < 0.001$; RMSEA = 0.108_(.094-.122); CFI = 0.950; TLI = 0.934; SRMR = 0.062). The statistically significant paths were from avoidant attachment to positive partner behaviors, negative partner behaviors, and relationship satisfaction. Paths from positive partner behaviors and from negative partner behaviors to relationship satisfaction were also significant. The indirect path from avoidant attachment to positive behaviors to relationship satisfaction was also significant ($\psi = -0.100; p < 0.01$), as was that from avoidant attachment to negative behaviors to relationship satisfaction ($\psi = -0.110; p < 0.01$). No paths from anxious attachment to partner behaviors or to relationship satisfaction were significant for romantic relationships.

The aforementioned results support the hypothesis that positive and negative partner behaviors may partially mediate the relationship between avoidant attachment style and relationship satisfaction for romantic relationships. Within the study dataset, no evidence was found for the significant role of anxious attachment style in relationship satisfaction for romantic relationships, while avoidant attachment was found to be significantly related to the reported frequency of both positive and negative partner behaviors, as well as relationship satisfaction within romantic relationships.

Romantic Relationship Length as a Moderator. A secondary hypothesis was that the mediational role of partner behaviors would be greater in those relationships of shorter duration. This supposition was tested for romantic relationships only, as data on relationship length was not collected for relationships with family or friends. As in the main hypothesis, paths were

created from the attachment subscales to measures of partner behavior and relationship satisfaction, and from partner behaviors to relationship satisfaction. Based on research and census data pointing to an eight year median duration of marriages that end in divorce (Kreider & Ellis, 2011; Kurdek, 1999), these models were run separately for those reporting on romantic relationships from 0.5 to 7.9 years in duration and for those eight or more years in duration. The results of the model for romantic relationships divided by relationship length are shown in figures 3 (under 8 years) and 4 (eight years and over).

The model fit for those with relationship duration of under eight years was acceptable ($\chi^2_{(69, n=104)} = 167.790, p < 0.001$; RMSEA = 0.117_(.095-.140); CFI = 0.939; TLI = 0.920; SRMR = 0.070). The only statistically significant path was from avoidant attachment style to positive partner behaviors. The direct path from avoidant attachment to relationship satisfaction has a large negative path coefficient (-0.767), but it was not statistically significant due to significant uncertainty regarding the estimate of mean measurement for the pathway (S.E. = 0.977). In fact, no indirect paths were statistically significant, nor were direct paths of attachment style or partner behaviors on relationship satisfaction. These results suggest that, for romantic relationships less than eight years in length, greater avoidant attachment is related to decreased frequency of positive partner behaviors. However, neither attachment style nor frequency of partner behaviors was found to significantly affect current relationship satisfaction for those in relationships of less than eight years in duration.

The model fit for those with relationship duration of eight years and greater was acceptable ($\chi^2_{(69, n=108)} = 149.079, p < 0.001$; RMSEA = 0.104_(.081-.126); CFI = 0.954; TLI = 0.939; SRMR = 0.063). The statistically significant paths were from avoidant attachment to positive partner behaviors, negative partner behaviors, and to relationship satisfaction. The path from

negative partner behaviors to relationship satisfaction was also significant. No indirect paths were significant, nor were direct paths from anxious attachment style or positive partner behaviors to relationship satisfaction.

These results suggest that avoidant attachment style has a significant and negative direct association to romantic relationship satisfaction directly, as well as an indirect association through a decrease of positive partner behaviors and an increase of negative partner behaviors. These behaviors are in turn significantly and negatively related to relationship satisfaction. Of note is that anxious attachment style does not seem to be significantly related to either partner behaviors or relationship satisfaction, regardless of the length of the relationship. Importantly, these findings should be considered exploratory. The significant decrease in sample size (to group those in romantic relationships by duration) without commensurate change in number of parameters being estimated results in a poor ratio of sample size to number of free parameters. The ideal ratio of participants per parameter is 5 to 1 (Bentler & Chou, 1987). Contrast this with these relationship duration models, which have ratios of less than 2 to 1. Thus, the model lacks sufficient power and findings should be interpreted with caution. Further research with greater sample sizes may be warranted.

Relationship Satisfaction Mediation Model for Friendships. The results of the SEM model for friendships are shown in Figure 5. The model overall had a mediocre fit ($\chi^2_{(69, n=307)} = 413.060, p < 0.001$; RMSEA = 0.127_(.116-.139); CFI = 0.921; TLI = 0.896; SRMR = 0.128). This suggests that the structural model may be somewhat different from the measurement model in some way (i.e., that the constructs being measured behave differently for friendships than for the other two relationship types). In an effort to better assess the origin of such measurement invariance, a latent repeated measures analysis was attempted. However, the repeated measures

model failed to converge (and thus could not be used) – perhaps due to invariance at the configural, loading, or intercept level; accordingly, the originally specified structural model was retained despite its mediocre fit.

As shown in Figure 5, the statistically significant paths were from avoidant attachment to positive partner behaviors and to relationship satisfaction. Paths from positive partner behaviors and negative partner behaviors to relationship satisfaction were also significant. None of the indirect paths from attachment style to partner behaviors to relationship satisfaction were significant, nor were any paths from anxious attachment to partner behaviors or to relationship satisfaction. As in romantic relationships, no evidence was found for a significant role of anxious attachment style in relationship satisfaction for friendships.

Such results suggest that avoidant attachment style may exert a significant negative impact on relationship satisfaction with close friends, and may also result in a decrease of positive partner behaviors. Negative partner behaviors are also significantly and negatively related to relationship satisfaction in friendships, but these behaviors are not significantly related to attachment style. As in romantic relationships, anxious attachment style does not seem to significantly impact either partner behaviors or relationship satisfaction.

Relationship Satisfaction Mediation Model for Family Members. The results of the model for family members are shown in Figure 6. The model overall had an acceptable fit ($\chi^2_{(69, n=307)} = 294.260, p < 0.001$; RMSEA = 0.103_(.091-.1152); CFI = 0.953; TLI = 0.938; SRMR = 0.082). The paths from avoidant attachment to positive partner behaviors and to relationship satisfaction were statistically significant, as were the paths from anxious attachment style to positive partner behaviors, negative partner behaviors, and to relationship satisfaction. Paths from positive

partner behaviors and negative partner behaviors to relationship satisfaction were also significant.

These results suggest that for family relationships, anxious attachment style, avoidant attachment style, and negative partner behaviors each have a direct negative association with relationship satisfaction. Positive partner behavior also has a direct positive association with relationship satisfaction. Anxious attachment style has a direct positive association with positive and negative partner behaviors, and avoidant attachment has a direct negative association positive partner behaviors.

The indirect path from anxious attachment to positive behaviors to relationship satisfaction was statistically significant ($\psi = 0.045$; $p < 0.05$), indicating that the reported frequency of positive partner behaviors partially mediates the relationship between anxious attachment style and relationship satisfaction for relationships with family members. Interestingly, while anxious attachment has a negative direct effect of relationship satisfaction, it also appears that anxious attachment is related to increased reported frequency of positive behaviors. The overall effect of the indirect path is positive on relationship satisfaction.

The indirect path from anxious attachment to negative behaviors to relationship satisfaction was also significant ($\psi = -0.050$; $p < 0.01$), indicating that the frequency of negative partner behaviors partially mediates the relationship between anxious attachment style and relationship satisfaction, with an overall negative indirect effect on relationship satisfaction.

Finally, the indirect path from avoidant attachment to positive behaviors to relationship satisfaction was also significant ($\psi = -0.116$; $p < 0.001$), indicating that the frequency of positive partner behaviors partially mediates the relationship between avoidant attachment style and relationship satisfaction, with an overall negative indirect effect on relationship satisfaction.

Contrary to the aforementioned findings for romantic relationships and friendships, this model suggests that anxious attachment is negatively related to relationship satisfaction for family relationships, both directly and indirectly, through both positive and negative partner behaviors.

Relationship Satisfaction as a Partial Mediator of Life Satisfaction. Another primary research question involved the potential role of relationship satisfaction as a mediator between attachment style and life satisfaction (Hypothesis 4). Path choice was driven by results from aforementioned analyses, with autoregressive paths created from the avoidant attachment subscale for each relationship type to each of the respective relationship satisfaction measures. As the anxious attachment subscale had a significant impact on relationship satisfaction for family relationships in the previous analysis, that pathway was also included. Paths were created from each of the relationship satisfaction measurements (i.e., romantic partner, family member, and friend) to the overall measure of life satisfaction (SWL).

The results of the model are shown in Figure 7. The model overall had an acceptable fit ($\chi^2_{(218, n=307)} = 635.729, p < 0.001$; RMSEA = 0.079_(.072-.086); CFI = 0.934; TLI = 0.923; SRMR = 0.047). As expected on the basis of previously discussed results, paths from each of the attachment subscales to their respective relationship satisfaction measures were statistically significant (i.e., avoidance in a romantic relationship was negatively related to romantic relationship satisfaction, etc.), while the only significant path from relationship satisfaction to life satisfaction was that of the romantic relationships. Higher relationship satisfaction in romantic relationships also had a significant positive association with reported life satisfaction. Additionally, the only significant indirect path was that from avoidant attachment in romantic partners to romantic relationship satisfaction to life satisfaction ($\psi = -0.304; p < 0.001$). This

suggests that relationship satisfaction in a romantic relationship partially mediates the association between avoidant attachment style and life satisfaction, with an overall negative indirect effect on life satisfaction.

This SEM model points to the important role that romantic relationship satisfaction may play in determining life satisfaction. Conversely, one's degree of satisfaction with family relationships and friendships does not appear to be significantly related to life satisfaction.

Other Findings

Relationship Type (Friend vs. Family vs. Romantic Partner). In paired-samples tests comparing means between different relationship types, no significant differences were found in rated relationship satisfaction. Respondents similarly rated their satisfaction with their romantic partners, family members, and close friends.

Paired-samples tests were conducted to compare the frequency of reported positive partner behaviors between relationship types. No significant differences in frequency of reported partner behaviors were noted between family relationships and friendships. However, there was a significant difference in the frequency of positive partner behaviors between romantic partners ($M=116.19$, $SD = 39.883$) and family members ($M=89.47$, $SD=39.116$) ($t(231) = 11.244$, $p<0.001$). A significant difference was also found between romantic partners ($M=116.19$, $SD = 39.883$) and friends ($M=87.36$, $SD=32.316$) ($t(231) = 13.912$, $p<0.001$). Respondents reported that romantic partners engaged in significantly more positive behaviors than did friends or family members.

Paired-samples tests also revealed significant differences between reported frequencies of negative partner behaviors between each of the three relationship types. These included a difference in the frequency of negative partner behaviors between romantic partners ($M=32.18$,

SD = 14.119) and family members ($M=25.66$, $SD=11.447$) ($t(231) = 7.935$, $p<0.001$); between romantic partners ($M=32.18$, $SD = 14.119$) and friends ($M=23.39$, $SD=9.256$) ($t(231) = 10.350$, $p<0.001$), and between family members ($M=25.99$, $SD=11.238$) and friends ($M=23.65$, $SD=9.580$) ($t(306) = 3.834$, $p<0.001$). Respondents reported that family members engaged in significantly more negative behaviors than did friends and that partners engaged in significantly more negative behaviors than both friends and family members.

Romantic Relationship Status. Secondary research questions involved potential differences between those in versus those not in romantic relationships (Hypothesis 5).

A one-way between-subjects ANOVA was conducted to compare the effects of romantic relationship status on life satisfaction. There was a significant effect of relationship status on life satisfaction ($F(1, 305) = 14.626$; $p<0.001$), with those in a romantic relationships (married, long-term committed relationship, dating) reporting significantly greater life satisfaction than those not currently in a romantic relationship (single, divorced, widowed, separated, widowed). However, amongst those in romantic relationships, a significant positive linear relationship was found ($b_1 = 3.033$; $p<0.001$; $R^2 = 0.129$), with those in more satisfying romantic relationships reporting greater life satisfaction than those in less satisfying romantic relationships (Hypothesis 5a). This finding is consistent with the relevant SEM results discussed above.

No significant differences were found between non-attached and romantically involved respondents regarding the satisfaction of relationships with friends. However, those in romantic relationships reported significantly greater relationship satisfaction with family members than did non-attached respondents ($F(1, 305) = 18.916$; $p<0.001$).

A one-way ANOVA was conducted to compare the impact of romantic relationship status on the reported frequency of relational partner behaviors. Non-attached respondents reported a

significantly greater frequency of positive behaviors from friends than did those in romantic relationships ($F(1, 305) = 4.046$; $p = 0.045$). There was no significant difference found in reported frequency of supportive behaviors by family members. Non-attached respondents also reported a significantly greater frequency of negative behaviors from friends than did those in romantic relationships ($F(1, 305) = 6.610$; $p = 0.011$). There was no significant difference found in reported frequency of negative behaviors by family members between non-attached respondents and those in romantic relationships (Hypothesis 5b).

While we do not have an attachment measure within a romantic relationship for non-attached respondents, comparisons were made between attachment styles with family members and friends. Interestingly, in relationships with family members, non-attached respondents reported significantly greater avoidant attachment ($F(1, 305) = 20.467$; $p < 0.001$) and anxious attachment ($F(1, 305) = 16.016$; $p < 0.001$) than did respondents in romantic relationships. No significant differences were noted between attached and non-attached respondents in attachment style within friendships.

Age. Other secondary research questions involved potential differences based upon respondent age (Hypothesis 6). Based upon prior findings (Blanchflower & Oswald, 2008; Mroczek & Sprio, 2007), nonlinear associations between age and life satisfaction were tested, in addition to simple associations. Contrary to previous research, life satisfaction was not significantly related to age in the study sample, either for men or for women. Additionally, age was not a significant predictor of relationship satisfaction for friendships or family relationships. Attachment style was not found to be significantly related to age in any of the relationship types examined.

Age did significantly predict relationship satisfaction for romantic relationships ($b_1 = -0.11$; $p = 0.031$; $R^2 = 0.020$), with older respondents rating their romantic relationships as less satisfying than younger respondents. However, age is highly correlated with relationship length ($r=0.783$, $p<0.01$) and when relationship length was entered as a predictor of relationship satisfaction, it appeared to have a slightly greater effect than did age ($b_1 = -0.13$; $p = 0.023$; $R^2 = 0.024$). When both age and relationship duration were included as predictors of relationship satisfaction, the variables in combination predicted relationship satisfaction ($p=0.042$), but neither predictor was significant independent of the other. It is thus difficult to know the extent to which each predictor may drive relationship satisfaction.

Attachment Style Interaction. Analysis of a simplified regression model using only avoidant and anxious attachment subscale scores as predictors of relationship satisfaction revealed a significant interaction effect between the two attachment subscales ($b = -0.072$; $p < 0.001$; $R^2 = 0.498$). Figure 8 depicts a median split of each of the two attachment subscales and their association with relationship satisfaction. Of note is that low relationship satisfaction was particularly associated with the co-occurrence of higher scores on anxious and avoidant attachment subscales. See figure 9 for descriptive statistics for attachment measures between relationship type.

Discussion

The principal aims of the present study were to investigate: (a) the hypothesized impact of both attachment style and partner behaviors on relationship satisfaction; (b) to explore the degree to which one's partner's behaviors might mediate the effect of attachment style on relationship satisfaction; and (c) to examine hypothesized effects of attachment style and relationship satisfaction on one's overall life satisfaction.

Attachment Style. In the study's primary SEM analyses, avoidant attachment was found to be strongly inversely associated with relationship satisfaction across all three major interpersonal domains: romantic, friendship, and family. This finding is consistent with that of previous reports (Mikuliner & Shaver, 2007; Welch & Houser, 2010) linking avoidant attachment with dissatisfaction in close relationships.

The deleterious relational impact of avoidant attachment appeared to be partially mediated by its effect on partner behaviors. Specifically, avoidant attachment is related to a significantly reduced reported frequency of positive partner behaviors across all 3 relationship types – a reduction itself predictive of significantly reduced relationship satisfaction. In fact, it is likely that certain interpersonal characteristics of avoidant attachment – e.g., greater independence and lower self-disclosure (Anders & Tucker, 2000; Shaver & Mikuliner, 2002) – may limit the expression of positive support from one's relational partners. Avoidant attachment was also associated with more frequent negative partner behaviors in the present study, but only within romantic relationships. It is possible that a greater degree of support and closeness are expected from romantic partners than from family and friends. If so, avoidant tendencies in romantic relationships may elicit a particularly high expression of frustration and other negative behaviors from relational partners, as supportive behaviors fall significantly below expectations.

Exploratory study analyses sub-divided participants by the duration of their romantic relationships, and the significantly adverse effect of avoidant attachment only held for relationships of at least eight years in length. This finding runs counter to the study hypotheses (which had posited a greater impact of maladaptive attachment on shorter, as opposed to longer-duration, relationships). However, it is consistent with meta-analytic cross-sectional findings that insecure attachment styles are related to increasingly negative relationship outcomes over

the duration of the relationship. Such outcomes include decreased positivity, openness, and use of effective maintenance factors (Hadden, Smith, & Webster, 2014; Ogolsky & Bowers, 2012). Partner behaviors were not significantly related to relationship satisfaction for those relationships less than eight years in length. However, for longer relationships, the significant effect of only negative partner behaviors on relationship satisfaction is consistent with previous findings that negative partner interactions predict both positive and negative affect in the long-term, while positive partner interactions predict neither (Newsom, Nishishiba, Morgan, & Rook, 2003).

Contrary to *a priori* expectations, anxious attachment had no significant negative association in principal study SEM models on relationship satisfaction in either romantic or friendship domains. It did, however, adversely affect satisfaction with family relationships, both directly and indirectly via its association with negative partner behaviors. Interestingly, however, anxious attachment was also associated with *increased* positive behaviors from family members. This overall observed dynamic within family relationships is consistent with the study hypothesis (3b) that the support-seeking characteristic of anxious attachment may elicit both supportive and punishing behaviors from relational partners. It is unclear why such patterns were not noted for romantic partners or friends, but it is possible anxious attachment is particularly prone to influence the behaviors of one's family members, who may have been conditioned to respond to such requests (and may indeed have reinforced such behavior patterns) throughout the life of the respondent; friends and romantic partners may be better able to better resist such demands on the basis of the (typically) briefer duration of such relationships.

While the attachment measure utilized in this study does not have specific scale score cutoffs to distinguish between the four categorical attachment styles (secure, anxious, dismissive avoidant, and fearful avoidant), the measure's anxious and avoidant scale scores can be

combined to approximate such categories. Participants who are low on both anxious and avoidant subscales are likely to be *securely attached*; those high on only the anxious subscale are likely to be *anxiously attached*; those high on only the avoidant subscale are likely to be *dismissively avoidant*; and those high on both anxious and avoidant subscales are likely to be *fearfully avoidant*. Analysis of avoidant and anxious attachment subscale scores as predictors of relationship satisfaction revealed a significant interaction effect between the two. Specifically, low relationship satisfaction was particularly associated with the co-occurrence of anxious and avoidant attachment proclivities – that is, with the fearfully avoidant attachment style. In future research, it would likely be beneficial for investigators to use an attachment measure that allows for better differentiation among the four attachment styles to permit a more robust analysis of the potential interaction between the dimensions of avoidant and anxious attachment on constructs of interest.

It was also found that the subscales of anxious and avoidant attachment were strongly correlated with one another. Thus, it is possible that there was very little unique variance of anxious attachment above and beyond the variance shared with avoidant attachment. In future research, use of a measure that is better able to get at differences between anxious and avoidant attachment factors would be useful in clarifying the relative impact of each.

Partner Behaviors. As previously noted, both positive and negative partner behaviors appeared to partially mediate the relationship between attachment style and relationship satisfaction in study analyses. The pattern varied somewhat, however, across the three different relationship types. In romantic relationships, positive and negative behaviors both acted as partial mediators of the effect of avoidant attachment, but not anxious attachment. This result extends the previously reported finding that perceived social support mediates the relationship

between avoidant attachment and marital satisfaction (Meyers & Landsberger, 2002); specifically, it suggests that *negative* partner behaviors may be just as important as positive (e.g., supportive) behaviors. Notably, within the study SEM model of family relationships, positive partner behaviors acted as a partial mediator of the effects of both anxious and avoidant attachment, while negative behaviors only acted as a partial mediator of the effect of anxious attachment. Within friendships, no significant mediational paths were observed.

Interestingly, romantic partners were reported to exhibit significantly more positive and negative behaviors toward study participants than did either their friends or family. One hypothesis for this finding may be that people typically spend more time interacting with a romantic partner, as opposed to a friend or other family member, and perhaps to rely on them more heavily for support.

Previous research (Bertera, 2005; Fiore, Becker, & Coppel, 1983; Rook, 1984) has found that the detrimental impact of negative partner behaviors is greater than the beneficial impact of positive partner behaviors on both physical and mental health outcomes. And, consistent with such results, in the present investigation the inverse association between negative partner behaviors and relationship satisfaction was stronger than the positive association between positive partner behaviors and relationship satisfaction. However, this pattern was observed only for romantic partners and close friends (not family members). Additionally, both positive and negative partner behaviors were significantly associated with relationship satisfaction across all three relationship types.

Study participants also reported that their romantic partners engage in significantly more negative behaviors than do family members or friends, and that family members engage in significantly more negative behaviors than do friends. It is unclear, however, the degree to

which this pattern may be related to: (a) the level of emotional closeness felt in each of these relationships; (b) the sheer amount of time spent with each relational partner; or (c) the duration of each relationship. It would be interesting and informative for future investigations to gather data that might enable clarification of this question.

Life Satisfaction. As expected, romantic relationship status was found to be significantly associated with life satisfaction. Specifically, study participants in current romantic relationships reported feeling more satisfied with life than did those not in a romantic relationship. Notably, while one's reported satisfaction in romantic relationships was found to be a significant positive predictor of life satisfaction in study SEM analyses, relationship satisfaction with friends and family did not significantly predict life satisfaction.

Interestingly, participants with no romantic relationship reported both more positive and more negative behaviors from their close friends than did those participants in romantic relationships. This result extends previous findings that romantically unattached young adults rely more on friends and spend a greater amount of time with friends than do those in romantic relationships (Carbery & Buhrmester, 1998). No significant differences in the reported behaviors of family members were noted between the two groups.

Those in romantic relationships were also significantly more satisfied with their family relationships than were single participants. Single respondents also reported significantly greater levels of avoidant and anxious attachment with family members than did those in romantic relationships, although no such pattern was noted in friendships. It may be that individuals with maladaptive family attachments have a more difficult time beginning and sustaining relationships, or it may be that those who are not in romantic relationships experience (over time)

a deterioration in the quality of family relationships in a way that romantically involved respondents do not.

Age. Contrary to previous reports of a nonlinear relationship between age and life satisfaction – with satisfaction declining from early adulthood through middle age and then rebounding (Baird, Lucas, & Donnellan, 2010; Mroczek & Spiro, 2005) – no evidence was found in the present investigation of any significant association between age and life satisfaction. On the other hand, some previous research has suggested that life satisfaction may remain relatively stable across the lifespan, especially when other factors such as income and religion are adequately controlled (Diener, Suh, Lucas, & Smith, 1999). For example, in a large survey of nearly 60,000 adults across 40 nations, life satisfaction was not found to decline with age, although there was a slight increase noted for people in their 20s and 80s (Diener & Suh, 1998). It is possible, however, that the study sample was simply too small and limited in its age stratification to reveal such trends.

Limitations

Although the present study yielded a number of significant findings, it is also characterized by several important limitations that may temper their interpretation. First, the principal investigator inadvertently excluded one item from the study's attachment inventory (ECR-RS) – specifically, an item on the anxiety subscale. Fortunately, previous research on the measure has observed a factor loading for this omitted item highly similar to that of other items on the anxiety subscale across various relationship domains (e.g., mother, father, romantic partner, and friend). Accordingly, the missing item may have had a minimal impact on overall study results.

Although the primary study measures generally possess good psychometric properties (Barrera, Sandler, & Ramsay, 1981; Darbonne, Uchino, & Ong, 2013; Fraley, Heffernan, Vicary, & Brumbaugh, 2011; Pavot & Diener, 1993; Renshaw, McKnight, Caska, & Blais, 2010; Ruehlman & Karoly, 1991), they are all self-report measures that rely heavily on each study participant's ability and willingness to accurately report on their experiences in close relationships. Prior research has found that the majority of respondents rate themselves as more securely attached than they are rated by a trained judge on the basis of a clinical interview (Bartholomew & Scharfe, 1993). The gold standard in attachment research has long been the Adult Attachment Interview (AAI; George, Kaplan, & Man, 1985), which possesses very good psychometric properties. No published studies have yet compared the ECR-RS to the AAI, but a relevant meta-analysis has concluded that self-report measures of attachment have only a small amount of overlap with AAI security (Roisman, Holland, Fortuna, Fraley, Clausell, & Clarke, 2007). Self-report measures are aimed at assessing how individuals interpret and understand their experiences in close relationships (Collins, 1996), while the AAI assesses the coherence of narratives that adults are able to produce about their childhood experiences with primary attachment figures, regardless of their evaluation of those experiences as positive or negative (Hesse, 1999). However, given that self-report measures focus on a respondent's current appraisal of a relationship, it has been suggested that self-report measures may be better predictors of perceived quality of current relationships, as compared to the AAI (Bernier & Dozier, 2002).

Additionally, it is possible that some of the observed variance in reported partner behaviors across attachment styles was an artifact of the differential salience of partner behaviors as a function of avoidant or anxious proclivity. For example, it is possible that the observed

inverse association between avoidant attachment style and positive partner behaviors is due, at least in part, to avoidant respondents being less successful at remembering and reporting on any relevant supportive partner behaviors, since such individuals are generally less inclined to attribute importance to relationships than are non-avoidant individuals (Shaver & Mikulincer, 2002).

Self-report measures were chosen in this study primarily due to their increased convenience, as they allowed for testing of a larger and more diverse sample than would have been feasible had in-person clinical interviews been utilized. However, it would be valuable to see an attempted replication of the present investigation using interview measures to assess attachment, partner behaviors, and relationship satisfaction.

In addition to the aforementioned limitations of self-report measures, they are also subject to mood state-dependent responding. For example, ratings of life satisfaction have been found to vary somewhat with current mood state (Gamble & Garling, 2012; Garling & Gamble, 2012). On the other hand, previous research has found self-reported attachment ratings to be reasonably stable, and not an artifact of current mood state (Haaga, Yarmus, Hubbard, Brody, Solomon, Kirk, et al., 2002). It is also important to note that, while measures were chosen to minimize perceptual biases, we cannot conclude with any degree of certainty that respondents were reporting on the actual frequency of partner behaviors. It may be that these reports are impacted by both ability of a respondent not only to make accurate interpretations of supportive and detrimental behaviors that occurred, but also to correctly recollect these at a later point in time.

Several factors and variables related to social support and attachment style were discussed in the literature review of this paper, but were not assessed in this study. These

included level of social integration, physical proximity of relational partner, and physical and mental health outcomes. Social integration refers to the level of participation one has in broad range of social relationships and the sense of belonging felt (Brissette, Cohen, & Seeman, 2000). It is possible that level of social integration buffers or extends effects of attachment style and partner behaviors. Given that a number of items on the measures of supportive partner behaviors may be impacted by physical proximity (e.g., “Watched after your possessions when you were away,” “Provided you with a place to stay.”), it is possible that rating of long-distance relationships differ. Future research including items related to social integration and proximity of relational partners may be useful in clarifying these questions. Additionally, much of the literature review focused on physical and mental health outcomes related to social behaviors and relationships. While no measures of mental or physical health were included in this study, it is plausible that such outcomes would vary (as relationship satisfaction does) across relationship type and by attachment style and partner behaviors. Future research may extend these findings by including such outcome measures.

Finally, all study data are cross-sectional in nature – gathered from each participant during a single assessment session. Thus, any causal inferences on the basis of study analyses must be regarded as highly tentative, at best. Certainly, longitudinal study designs will be necessary to better clarify the temporal associations that may exist between attachment style, partner behaviors, age, relationship length, and relationship satisfaction. In addition, a somewhat small sample size (relative to degrees of freedom needed given research hypotheses) limited the ability/power to detect small-to-medium effects using SEM, as well as to test interaction effects. Future research with larger samples sizes would be useful in better clarifying some of these findings.

Conclusion

This study has provided additional evidence of the significant potential impact of both attachment style and partner behaviors on adult relationship outcomes. Moreover, it extends previous findings by investigating the distinctive effects of each factor, as well as the way in which partner behaviors may partially mediate the impact of attachment style. The study also suggests that the effects of such variables may vary across three different relational domains – romantic, friendship, and family. Study results appear to be consonant with previous adult attachment findings of a differential effect depending upon on the relationship type, and consistent with the premise that adults typically seek different things from their friends as opposed to their romantic partners or close family members (Foltz, Barber, Weinryb, Morse, & Chittams, 1999). In fact, some have suggested that the ability to maintain flexibility in attachment behaviors across different relational domains may be indicative of psychological well-being, inasmuch as such flexibility should allow an individual to more successfully account for new information and experiences, rather than attending only to information that conforms to overly-broad, one-size-fits-all expectations about relationships in general (Bowlby, 1988).

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Tables and Figures

Table 1

Demographic Information (n=307)

	Frequency	Percentage of Respondents
GENDER		
Male	122	39.7
Female	181	59.0
Transgender	2	0.7
Prefer not to answer	2	0.7
AGE RANGE		
18-29	112	36.5
30-39	96	31.3
40-49	46	15.0
50-59	36	11.7
60+	17	5.5
ETHNICITY		
American Indian or Alaska Native	2	0.7
Asian or Asian American	8	2.6
Black or African American	25	8.1
Hispanic or Latino	13	4.2
White	246	80.1
Other	1	0.3
Multiple Identified	12	3.9
PRIMARY RELIGIOUS IDENTIFICATION		
Christianity	159	51.8
Judaism	8	2.6
Islam	4	1.3
Dharmic Religions	3	1.0
Agnosticism	36	11.7
Atheism	27	8.8
No Religious Beliefs	51	16.6
Other	19	6.2

Table 1(cont.)
Demographic Information (n=307)

	Frequency	Percentage of Respondents
LEVEL OF EDUCATION COMPLETED		
Grades 9-11	4	1.3
HS diploma or GED	34	11.1
Some college/technical degree	87	28.3
Associate's degree	38	12.4
Bachelor's degree	98	31.9
Some graduate/professional	12	3.9
Master's degree	22	7.2
Doctorate or Professional Degree	12	3.9
NUMBER IN HOUSEHOLD		
1	49	16.0
2	99	32.2
3	74	24.1
4	51	16.6
5	18	5.9
6	10	3.3
7+	6	1.9
ANNUAL HOUSEHOLD INCOME		
Under \$5000	10	3.3
\$5000-9999	15	4.9
\$10000-14999	16	5.2
\$15000-19999	14	4.6
\$20000-24999	26	8.5
\$25000-49999	83	27.0
\$50000-74999	76	24.8
\$75000-99999	37	12.1
\$100000-149999	26	8.5
\$150000+	4	1.3
CURRENT ROMANTIC RELATIONSHIP STATUS		
Single	67	21.8
Married or long-term committed relationship	186	60.6
Dating	33	10.7
Divorced	19	6.2
Widowed	2	0.7

Table 2

Standardized Latent Estimates for Measurement Model

	SAT FAM	AV FAM	ANX FAM	POS FAM	NEG FAM	SAT FR	AV FR	ANX FR	POS FR	NEG FR	SAT PAR	AV PAR	ANX PAR	POS PAR	NEG PAR	LIFE SAT
AV FAM	-.801***	1.000														
ANX FAM	-.680***	0.635***	1.000													
POS FAM	.428***	-.453***	-.152*	1.000												
NEG FAM	-.343***	.234***	.336***	.184**	1.000											
SAT FR	.251***	-.105	-.180*	.100	-.141	1.000										
AV FR	-.243***	.297***	.223**	-.234***	.096	-.770***	1.000									
ANX FR	-.203**	.190**	.360***	-.003	.214**	-.572***	.570***	1.000								
POS FR	.059	-.082	.133*	.659***	.316***	.286***	-.374***	-.059	1.000							
NEG FR	-.069	.125*	.264***	.247***	.501***	-.305***	.271***	.388***	.407***	1.000						
SAT PAR	.391***	-.348***	-.388***	.133	-.121	.233***	-.308***	-.203**	.074	-.061	1.000					
AV PAR	-.369***	.400***	.497***	-.073	.193**	-.166*	.269***	.203**	.020	.195**	-.819***	1.000				
ANX PAR	-.369***	.327***	.533***	.000	.271***	-.061	.123	.213**	.145	.188*	-.648***	.755***	1.000			
POS PAR	.132	-.152*	-.081	.576***	.136*	.191**	-.317***	-.154*	.601***	.184**	.441***	-.379***	-.184*	1.000		
NEG PAR	-.301***	.292***	.404***	.062	.520***	-.255***	.230**	.235**	.114	.462***	-.614***	.593***	.508***	-.141*	1.000	
LIFE SAT	.236**	-.210**	-.122	.148*	-.052	.154*	-.194**	-.120	.111	-.036	.423***	-.390***	-.257**	.189*	-.256***	1.000

Note: $p < .05 = *$; $p < .01 = **$; $p < .001 = ***$

Figure 1

Mediational Model - Partner Behaviors as Partial Mediators of Relationship Satisfaction, with Direct Effect of Attachment Style

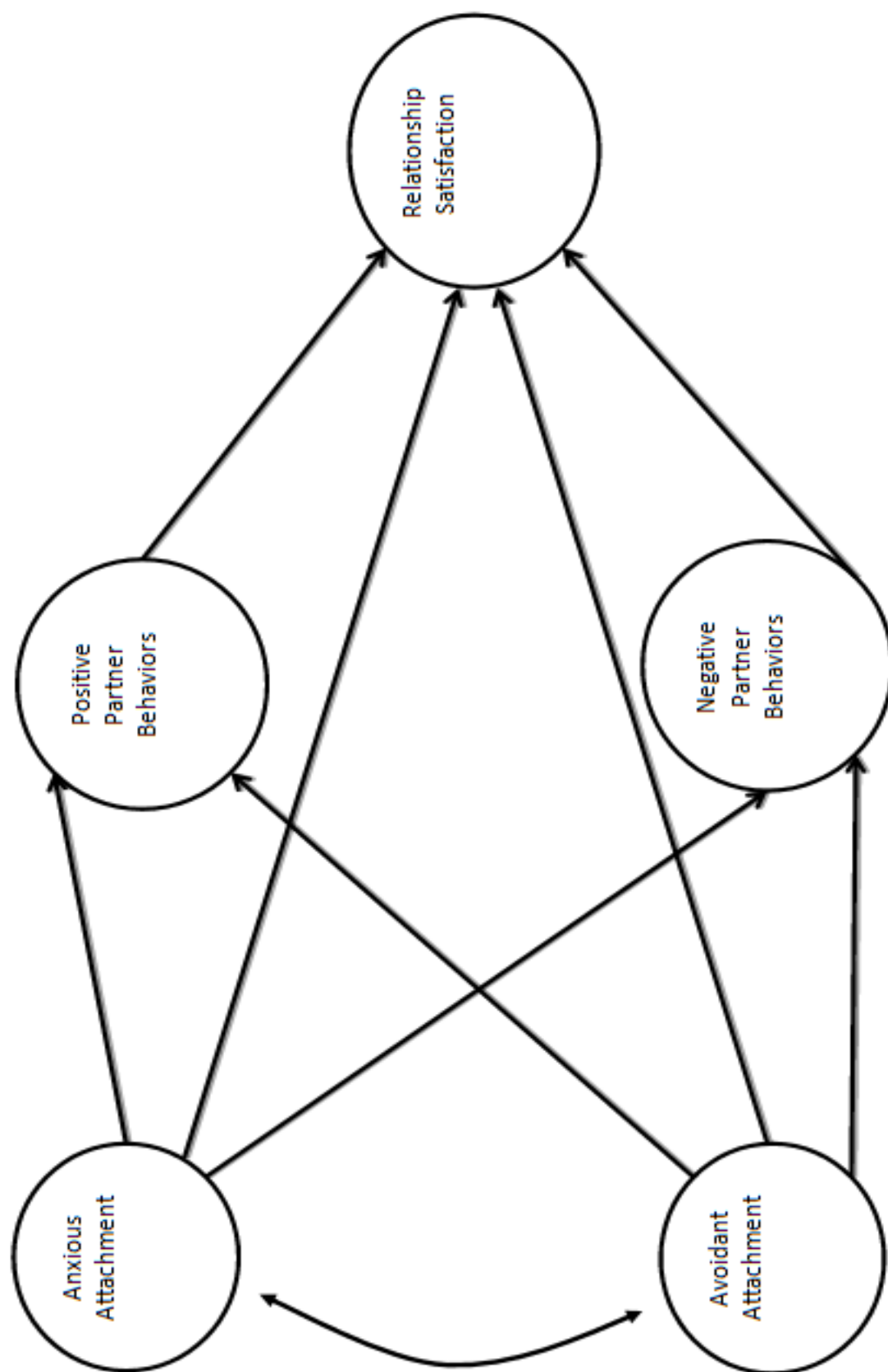
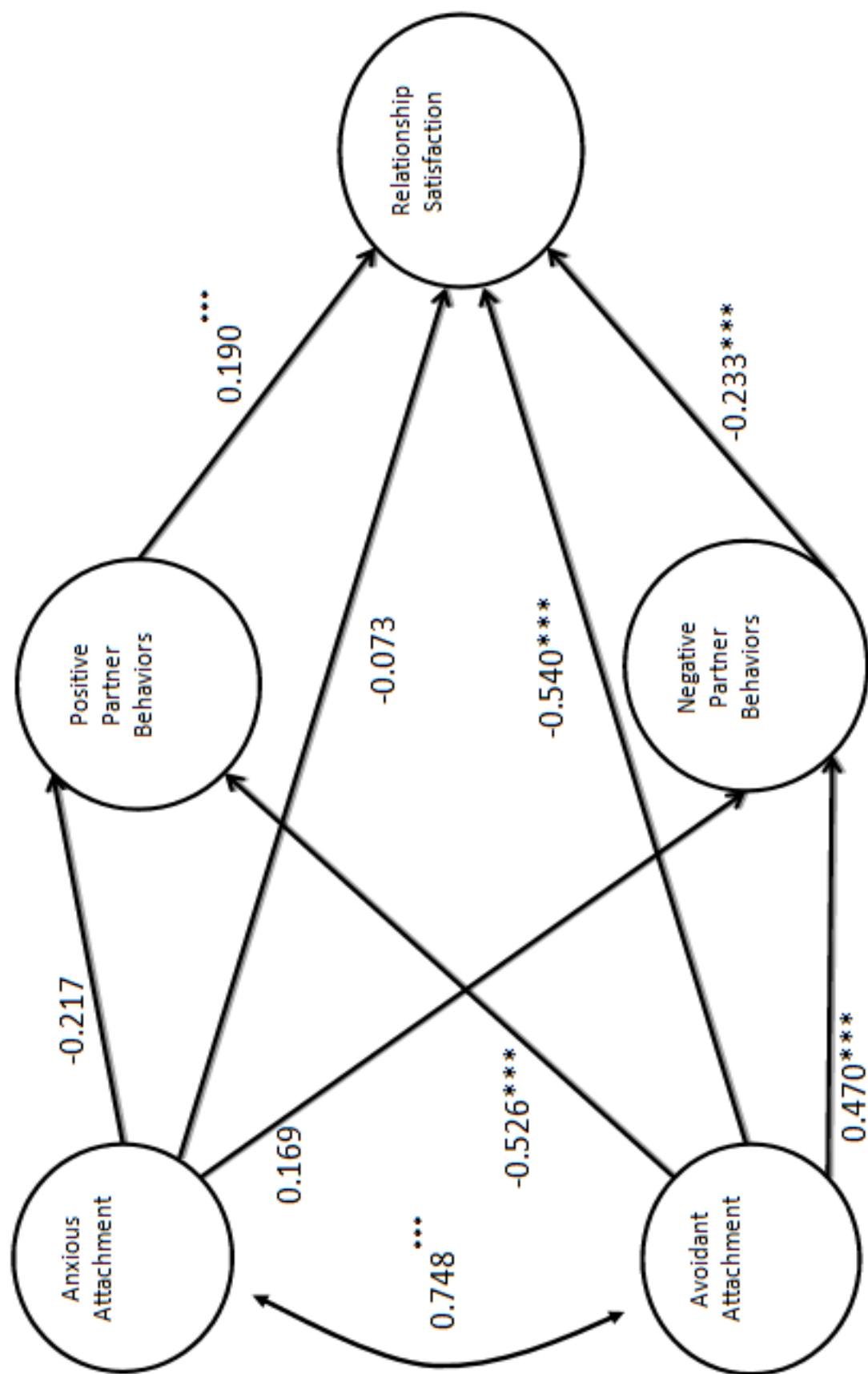


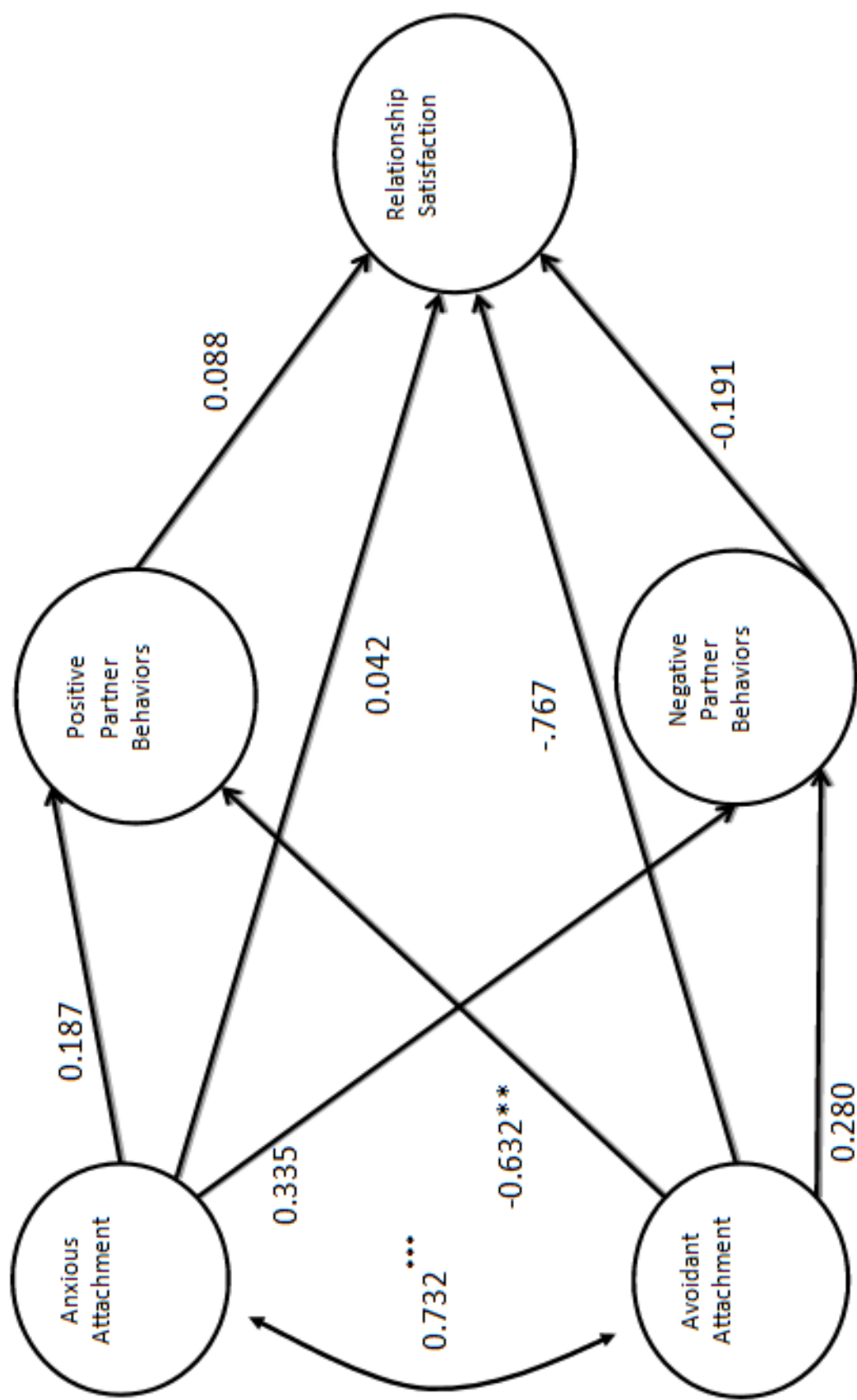
Figure 2

Partner Behaviors as Partial Mediators of Relationship Satisfaction, with Direct Effect of Attachment Style—For Romantic Partner



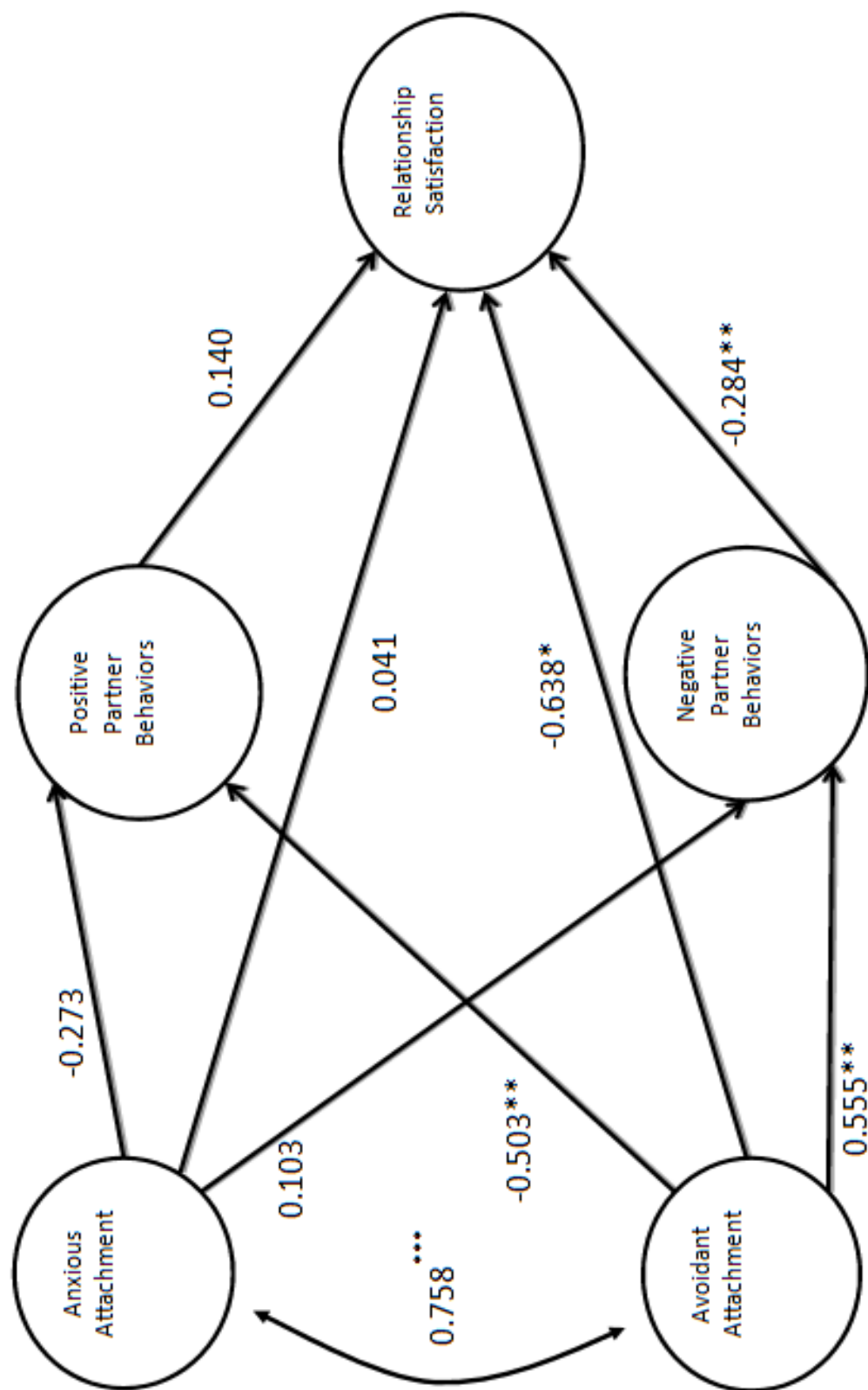
Note: * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$; Results are standardized; Residual and factors loadings not shown due to lack of space.

Figure 3
*Partner Behaviors as Partial Mediators of Relationship Satisfaction, with Direct Effect of Attachment Style--
 For Romantic Relationships under Eight Years*



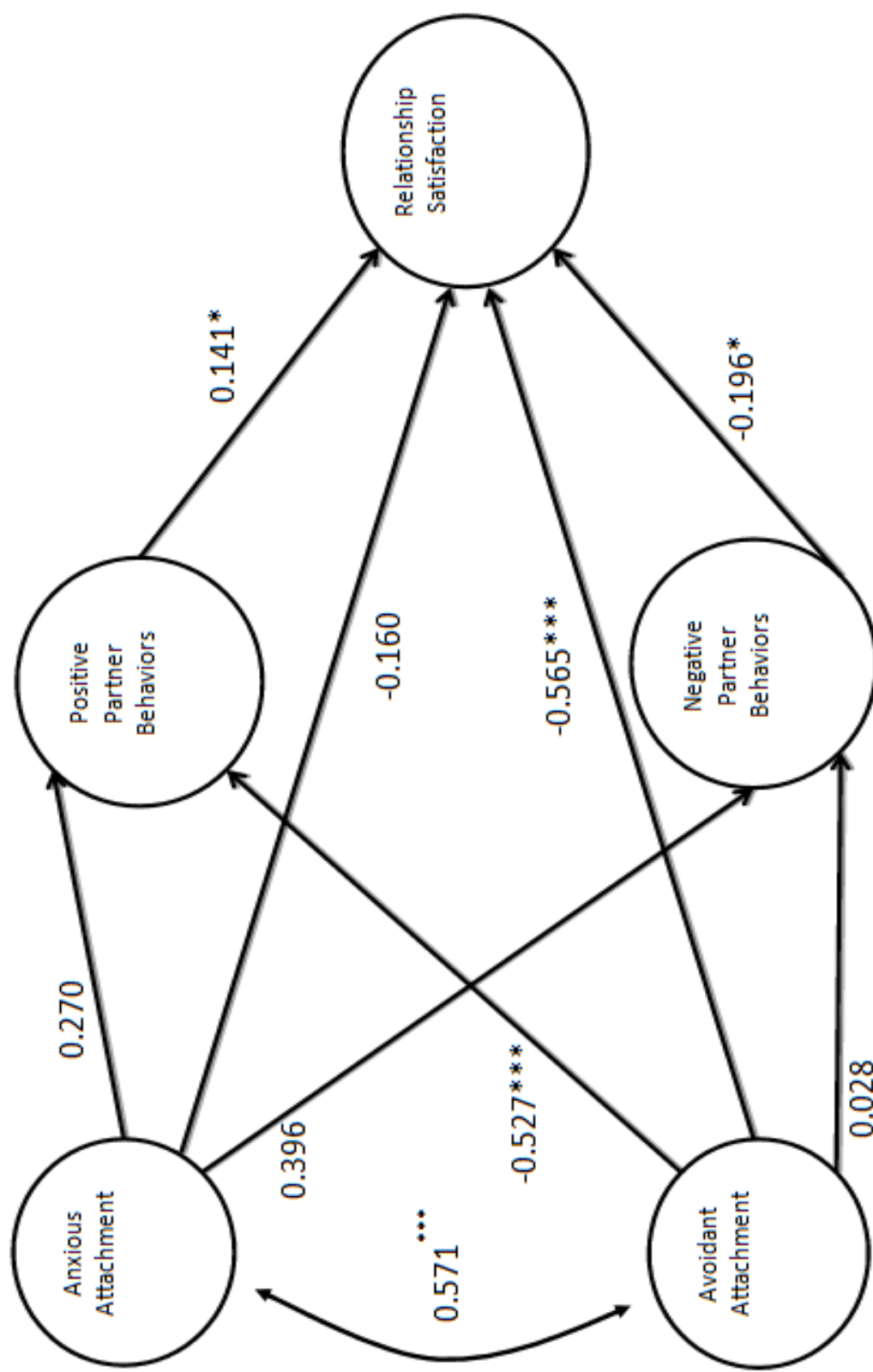
Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$; Results are standardized; Residual and factors loadings not shown due to lack of space.

Figure 4
*Partner Behaviors as Partial Mediators of Relationship Satisfaction, with Direct Effect of Attachment Style—
 For Romantic Relationship Eight Years or Longer*



Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$; Results are standardized; Residual and factors loadings not shown due to lack of space.

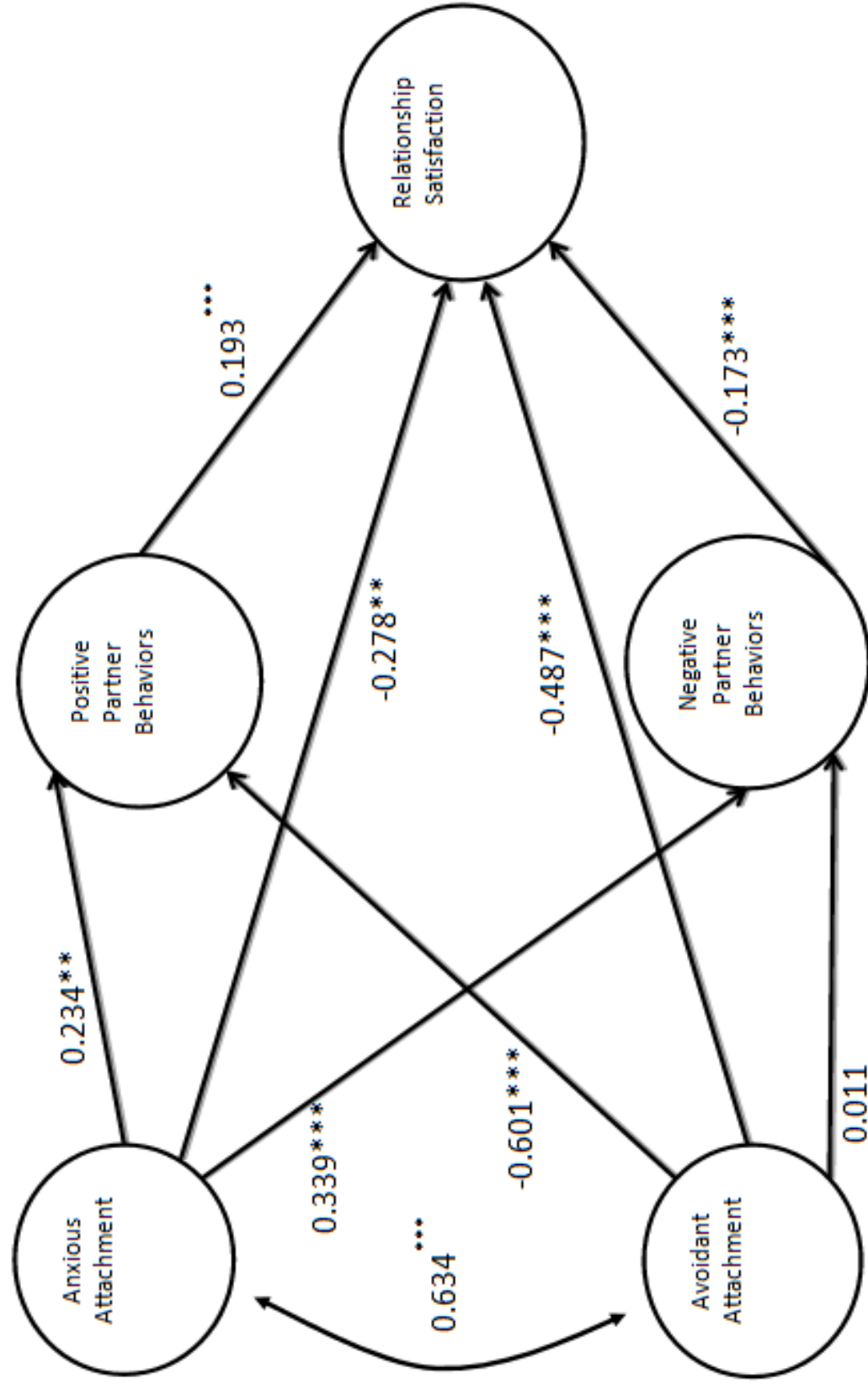
Figure 5
Partner Behaviors as Partial Mediators of Relationship Satisfaction, with Direct Effect of Attachment Style – For Friend



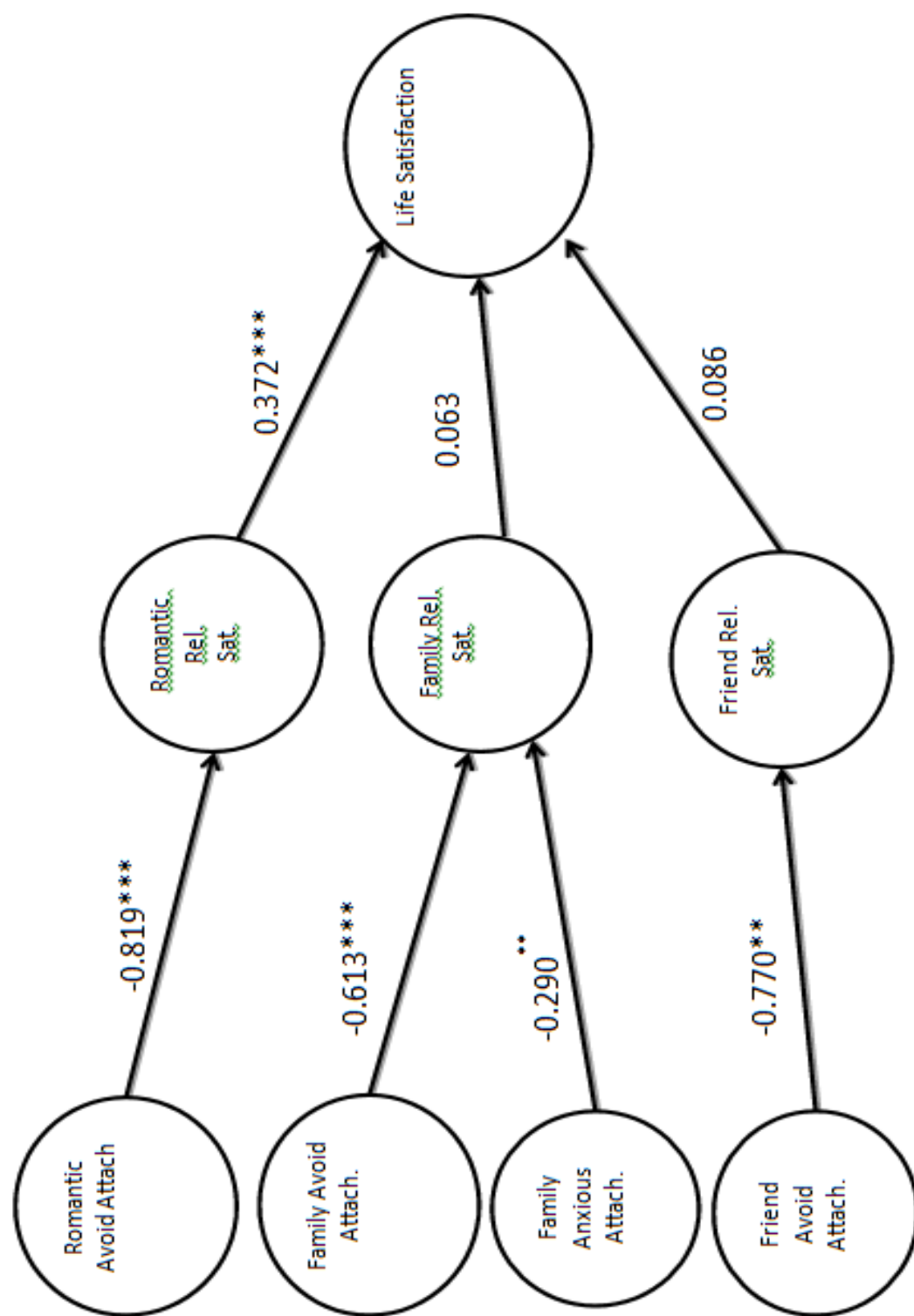
Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$; Results are standardized; Residual and factors loadings not shown due to lack of space.

Figure 6

Partner Behaviors as Partial Mediators of Relationship Satisfaction, with Direct Effect of Attachment Style—For Family Member



Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$; Results are standardized; Residual and factors loadings not shown due to lack of space.

Figure 7*Relationship Satisfaction as Partial Mediator on Life Satisfaction*

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$; Results are standardized; Residual and factors loadings not shown due to lack of space.

Figure 8

Estimated Marginal Means of Average Items Score for Relationship Satisfaction

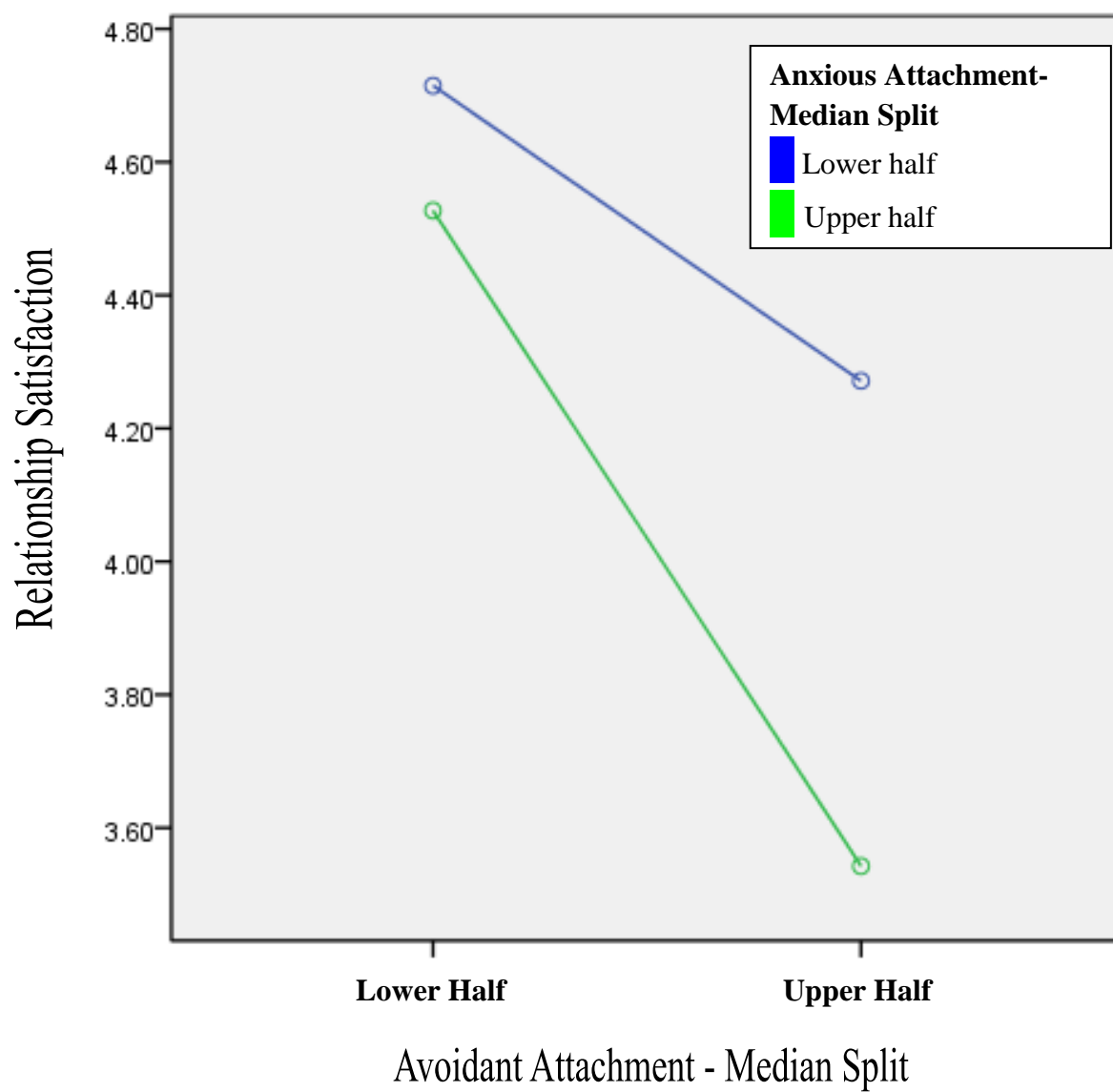


Figure 9*Descriptive Statistics for Attachment Measures*

ATTACHMENT DIMENSION	RELATIONSHIP TYPE	RANGE	MEAN	STANDARD DEVIATION
Anxious	Friend	1.00 – 6.67	2.22	1.43
Avoidant	Friend	1.00 – 7.00	2.33	1.18
Anxious	Family	1.00 – 7.00	2.07	1.57
Avoidant	Family	1.00 – 7.00	2.81	1.53
Anxious	Romantic Partner	1.00 – 7.00	2.31	1.79
Avoidant	Romantic Partner	1.00 – 7.00	2.08	1.29

Appendix

Appendix A

The Satisfaction with Life Scale (SWL)

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item.

- 1 = strongly disagree
- 2 = disagree
- 3 = disagree slightly
- 4 = neither agree nor disagree
- 5 = slightly agree
- 6 = agree
- 7 = strongly agree.

Items:

-
- 1. In most ways my life is close to ideal.
 - 2. The conditions of my life are excellent.
 - 3. I am satisfied with my life.
 - 4. So far I have gotten the important things I want in life.
 - 5. If I could live my life over, I would change almost nothing.

Appendix B

Experiences in Close Relationships – Relationship Structures (ECR-RS)

This questionnaire is designed to assess the way in which you mentally represent important people in your life. You'll be asked to answer questions about your romantic partner (if in a current relationship), your closest family member, and your closest friend(s). Please indicate the extent to which you agree or disagree with each statement by circling a number for each item.

1 = strongly disagree
2 = disagree
3 = disagree slightly
4 = neutral

5 = slightly agree
6 = agree
7 = strongly agree.

Items:

1. It helps to turn to this person in times of need.
strongly disagree 1 2 3 4 5 6 7 strongly agree

2. I usually discuss my problems and concerns with this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

3. I talk things over with this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

4. I find it easy to depend on this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

5. I don't feel comfortable opening up to this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

6. I prefer not to show this person how I feel deep down.
strongly disagree 1 2 3 4 5 6 7 strongly agree

7. I often worry that this person doesn't really care for me.
strongly disagree 1 2 3 4 5 6 7 strongly agree

8. I'm afraid that this person may abandon me.
strongly disagree 1 2 3 4 5 6 7 strongly agree

9. I worry that this person won't care about me as much as I care about him or her.
strongly disagree 1 2 3 4 5 6 7 strongly agree

Appendix C

Relationship Assessment Scale (RAS)

Please mark on the answer sheet the letter for each item which best answers that item for you.

1. How well does your partner meet your needs?

1	2	3	4	5
<i>Poorly</i>		<i>Average</i>		<i>Extremely well</i>

2. In general, how satisfied are you with your relationship?

1	2	3	4	5
<i>Unsatisfied</i>		<i>Average</i>		<i>Extremely satisfied</i>

3. How good is your relationship compared to most?

1	2	3	4	5
<i>Poor</i>		<i>Average</i>		<i>Excellent</i>

4. How often do you wish you hadn't gotten in this relationship?

1	2	3	4	5
<i>Never</i>		<i>Average</i>		<i>Very often</i>

5. To what extent has your relationship met your original expectations:

1	2	3	4	5
<i>Hardly at all</i>		<i>Average</i>		<i>Completely</i>

6. How much do you love your partner?

1	2	3	4	5
<i>Not much</i>		<i>Average</i>		<i>Very much</i>

7. How many problems are there in your relationship?

1	2	3	4	5
<i>Very few</i>		<i>Average</i>		<i>Very many</i>

Appendix D

Inventory of Socially Supportive Behaviors (ISSB)

We are interested in learning about some of the ways that you feel people have helped you or tried to make life more pleasant for you over the *past four weeks*. Below you will find a list of activities that other people might have done for you, to you, or with you in recent weeks. Please read each item carefully and indicate how often the designated person did any of these activities for you, to you, or with you during the *past four weeks*. Use the following scale to make your ratings:

- 0 = Not at all
- 1 = Once or twice
- 2 = About once a week
- 3 = Several times a week
- 4 = About every day

Please read each item carefully and select the rating that you think is the most accurate.

During the past four weeks, how often did your partner/close friend/close family member do these activities for you, to you, or with you:

1. Looked after a family member when you were away.
2. Was right there with you (physically) in a stressful situation.
3. Provided you with a place where you could get away for a while.
4. Watched after your possessions when you were away (pets, plants, home, apartment, etc.).
5. Told you what she/he did in a situation that was similar to yours.
6. Did some activity with you to help you get your mind off of things.
7. Talked with you about some interests of yours.
8. Let you know that you did something well.
9. Went with you to someone who could take action.
10. Told you that you are OK just the way you are.
11. Told you that she/he would keep the things that you talk about private - just between the two of you.
12. Assisted you in setting a goal for yourself.
13. Made it clear what was expected of you.
14. Expressed esteem or respect for a competency or personal quality of yours.
15. Gave you some information on how to do something
16. Suggested some action that you should take.

17. Gave you over \$25.
18. Comforted you by showing you some physical affection.
19. Gave you some information to help you understand a situation you were in.
20. Provided you with some transportation.
21. Checked back with you to see if you followed the advice you were given.
22. Gave you under \$25.
23. Helped you understand why you didn't do something well.
24. Listened to you talk about your private feelings.
25. Loaned or gave you something (a physical object other than money) that you needed.
26. Agreed that what you wanted to do was right.
27. Said things that made your situation clearer and easier to understand.
28. Told you how he/she felt in a situation that was similar to yours.
29. Let you know that he/she will always be around if you need assistance.
30. Expressed interest and concern in your well-being.
31. Told you that she/he feels very close to you.
32. Told you who you should see for assistance.
33. Told you what to expect in a situation that was about to happen.
34. Loaned you over \$25.
35. Taught you how to do something.
36. Gave you feedback on how you were doing without saying it was good or bad.
37. Joked and kidded to try to cheer you up.
38. Provided you with a place to stay.
39. Pitched in to help you do something that needed to get done.
40. Loaned you under \$25.

Appendix E

Test of Negative Exchange (TENSE)

We are interested in learning about some of the ways that your relational partner has interacted with you over the *past four weeks*. Below you will find a list behaviors. Please read each item carefully and indicate how often the designated person did any of these to you during the *past four weeks*. Use the following scale to make your ratings:

- 0 = Not at all
- 1 = Once or twice
- 2 = About once a week
- 3 = Several times a week
- 4 = About every day

Please read each item carefully and select the rating that you think is the most accurate.

During the past four weeks, how often did your partner/close friend/close family member do these activities for you, to you, or with you:

1. Lost his or her temper with me.
2. Yelled at me.
3. Was angry with me.
4. Was impatient with me.
5. Nagged me.
6. Disagreed with me.
7. Took me for granted.
8. Took advantage of me.
9. Was inconsiderate.
10. Ignored my wishes or needs.
11. Took my feelings lightly.
12. Distracted me when I was doing something important.
13. Was too demanding of my attention.
14. Invaded my privacy.
15. Prevented me from working on my goals.
16. Made fun of me.
17. Laughed at me.
18. Gossiped about me.